

**Achievement of Therapeutic Objectives:  
An Analysis of Micro-Processes within a Single-Case Observational Design**

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## Abstract

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**Objective:** This study uses data from a single subject based on the previously published Randomized Control Trial of Brief Cognitive and Dynamic Therapy (Svartberg, Stiles & Seltzer, 2005). The present study investigates the change of four process variables: Insight, Motivation, Activating affects and Inhibitory affects, both within and across sessions. The study also inquires into whether there are sequential relationships between these four variables. **Method:** the patient in this study received Short-Term Dynamic Psychotherapy for 40 weeks. The patient met the criteria for a Cluster-C personality disorder. The data consists of process measures from the Achievement of Therapeutic Objectives Scale (ATOS), outcome measures from SCL-90, MCMI-C and IIP, in addition to qualitative observations. **Results:** The data was analyzed by a two-way Analysis of Variance design, linear regression and a Cross Lagged Correlation design. Variance, trends and the sequential relationships between the process variables were investigated. Results show only small changes in the process variables during the course of therapy. Within a therapy session there were found two small trends of sequential relationships: 1. Affective activation predicted Insight. 2. Inhibition predicted Insight. **Conclusion:** The overall results showed small changes during treatment. Such finding needs to be interpreted in light of that the patient's symptoms and functioning at treatment end and at a 2-year follow-up were unimproved.

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## **Introduction**

It has long been established that psychotherapy is effective in bringing about positive effects in psychological health (e.g. Ablon, Levy, & Katzenstein, 2006; Bergin, & Lambert, 1978; Garfield, Prager, & Bergin, 1971; Lambert, & Bergin, 1994; Luborsky, Singer, & Luborsky, 1975; Wampold et al., 1997, 2001;). Even so, the question of why and how such therapy works is still being investigated. One dispute is over whether the efficacy is attributed to factors common to many schools of therapy or rather factors specific to one particular therapy orientation (Wampold et al., 1997). Such inquiry has been an important aspect of psychotherapy research and development, where the goal has been to demonstrate that a particular approach is superior to rivaling approaches. Despite extensive research, outcome studies tend to show no significant difference in the effectiveness across therapeutic orientations (e.g. Wampold et al., 1997). One indication of this is that all treatments yield approximately equal benefits (Ahn & Wampold, 2001; Messer & Wampold, 2006; Wampold et al., 1997). Additionally, there appears to be an extensive overlap across orientations in their use of therapeutic techniques (Ablon & Jones, 2002). In such matters, to separate the different orientations in process-outcome research would bear little fruit. Taking this into consideration, psychotherapy research should "look beyond brand names" and focus on the process of change rather than the therapeutic orientation (Ablon et al., 2006; Goldfried, Castonguay, Safran, & Norcross, 1992).

The aim of this study is to analyze processes in therapeutic change, conceptualised by Short-Term Dynamic Psychotherapy (STDP). This will be done by investigating four process variables assessed by the Achievement of Therapeutic Objectives Scale (ATOS): Insight, Motivation, Activating affects and Inhibitory affects (McCullough et al., 2004). The study is based on a single-case and it includes repeated measures both within -and across sessions over the course of therapy. The quantitative measures obtained from the ATOS will be complimented with anecdotal descriptions of the therapy. Exploring the changes and the relationship between four process variables at micro-level, has never been done before, and will represent an important contribution to the understanding of change mechanisms in STDP. A part of the project is to contribute to the development of methods relevant for evidence-based clinical practice. To achieve an overall understanding of what happens in therapy, such methods will necessarily involve continuous assessment of the therapeutic processes, with quantitative as well as qualitative measures.

### **Short-Term Dynamic Psychotherapy for Treating Affect Phobias**

A number of meta-analyses have demonstrated the overall efficacy of Short-Term Psychodynamic Therapy in samples of various mental disorders (Abbass, Hancock, Henderson, & Kissely, 2006; Anderson & Lambert 1995), and for specific mental disorders (Leichsenring, 2001; Leichsenring, Rabung, & Leibing, 2004). Short-Term Dynamic Psychotherapy for treating affect phobias (STDP) is an integrative model which builds upon 50 years of research and therapy work, in particular by Malan and his colleagues (Malan, 1976, 1979). The treatment model is based on the hypothesis that conflicts about feelings, or "affect phobias," are the fundamental issues underlying many Axis I and Axis II disorders. The fundamental agent of therapeutic change is hypothesized to be systematic desensitization, or gradual exposure to feelings and the replacement of maladaptive defences with more adaptive affective responses (McCullough, 1999). To help desensitize and restructure affect phobias, three broad treatment objectives have been developed (McCullough et al., 2003). The first objective is Defence Restructuring, where the therapist helps the patient recognize and give up maladaptive defensive responses. The second objective is Affective Restructuring, which aims to help the patient experience affect without excessive inhibition. The third objective aims at helping the patient improve relationships and gain positive or realistic feelings toward self and others. In order to assess the patient's acquisitions of these treatment objectives, the ATOS scale has been developed (McCullough et al., 2004).

STDP has gained empirical support in the treatment of Cluster-C personality disorders when compared with Cognitive Behavioral Therapy, pure Cognitive Therapy, and Brief Supportive Psychotherapy (Svartberg, Stiles & Seltzer 2005; Winston et al., 1994). A convincing amount of outcome research also supports the efficacy of STDP in the treatment of complicated Axis I disorders (Abbass, 2010; Winston et al., 1991; Winston et al., 1994).

The patient in this study was diagnosed with dependent personality disorder, which belongs within the Cluster-C personality disorder of DMS-IV. Patients with dependent personality disorder are often characterized by low levels of activating affect, usually concerning anger, assertion and self-compassion, while levels of inhibitory affect, often seen as anxiety, are high (McCullough et al., 2003). For patients with a dependent personality disorder, the main threat concerns fear of rejection and abandonment (Beck & Freeman, 1990).

Cluster-C personality disorders have been found to be the most prevalent personality disorders in both general (Grant et al., 2004; Torgersen, Kringlen & Cramer, 2001) and clinical populations (Alnæs & Torgersen, 1988; Widiger & Shea, 1991). In addition, the

presence of Cluster-C personality disorders has been found to be related to poorer outcome in treatment of Axis I disorders (Reich & Vaslie, 1993). The findings point to the importance of investigating this population.

### **Insight**

The insight variable has relevancy across therapies in that it is associated with the client's involvement in therapy (Castanguay & Hill, 2007). However, insight can in many ways be described as elusive, as there has been no general agreement on how to define and measure the construct. This has made theorists stress the need for definitions (e.g. Crits-Christoph, Barber, Miller, & Beebe, 1993; Dymon 1948; Elliot et al.1994). Although the concept encompasses a diversity of meanings, a group of researchers on insight have agreed on a consensus definition. The Penn State Group and Hill (2007) understand insight as "conscious meaning shift involving new connections" (Hill et al., 2007, pp. 442). Factors such as complexity of insight, intensity of feeling related to insight, salience to conception of self, and the objects of insight, are all elements that could not be attained consensus about and therefore left out from the definition.

Another issue that is central for an understanding of insight, if it is to be understood as process or as outcome. The above definition implies that insight is a process. In this way, insight is seen as a mechanism, which operates alongside other processes in therapy to produce positive outcome. To conceptualize insight as outcome is to understand insight as an achievement in itself (Hill et al., 2007). This is characteristic of early psychoanalytic writings, where insight oriented therapy considered attainment of insight as the super ordinate goal of therapy (Messer & McWilliams, 2007). Research on insight either as a process variable or outcome of therapy is limited. As Elliott et al. (1994) point out, psychotherapy research has avoided the construct and little empirical effort has been made to test its relevance to psychotherapy outcome.

A review of studies on the relation of insight to outcome, found only eight studies conducted between 1956 and 2007 (Connolly Gibbons, Crits-Cristoph, Barber, & Schamberger, 2007). The results of the studies were mixed. Four studies found support for that increase in insight is related to good outcome (e.g. Grande, Rudolf, Oberbracht, & Pauli-Magnus, 2003). In one of these studies, Kivlighan et al. (2000) found a sequential relationship between insight and symptoms, where increases in insight led to decrease in symptoms. O'Connor, Edelstein Berry and Weiss (1994) found that insight over the course of treatment

followed a curvilinear form, and that average scores were related to outcome. Recently, Connolly Gibbons et al. (2009) found that changes in self-understanding were related to change in Psychodynamic Therapy, but not in Cognitive Therapy. However, other studies show no significant correlation of increase in insight and outcome (Connolly et al, 1999; Diemer, Lobell, Vivino, & Hill, 1996).

Connolly Gibbons et al. (2009) state that methodological problems on insight abound, and that the construct validity of instruments has not been sufficient enough to have captured the construct adequately. In addition, most studies have been focusing on brief therapies with less than 20 sessions and short follow-up periods. The existing data is ambiguous and the construct's relevance to therapy outcome is limited (Connolly Gibbons et al. 2007).

The ATOS definition includes the main points of Hill et al. (2007) and can be understood as: 1) The degree of clarity and fullness of verbal descriptions of maladaptive behavior (cognitive and defensive), including the gaining of awareness of unconscious motivations and feelings, 2) the ability to state how, why, and with whom the maladaptive patterns began, and 3) how, why, and with whom it is being upheld in the present, including secondary gains (McCullough et al, 2004). As STDP embrace insight as a process, it is meaningful to investigate how it changes in therapy and how it relates to the other process variables.

## **Motivation**

In a number of studies in which psychotherapists were asked to list central factors related to treatment outcome, the factor mentioned most often was the patient's motivation (Raskin, 2006). In clinical terms, motivation is often used as an antonym for terms such as denial and resistance, and a synonym for constructs such as acceptance and surrender (Miller, 1985).

Especially in psychodynamic psychotherapy, clinicians have often emphasized motivation as crucial to predicting outcome. Several studies on brief psychodynamic therapy have also indicated that motivation may be a key predictor of outcome within this tradition (Hoglend, 1996). Six different studies have reported a positive correlation between outcome and the appraisal of motivation made prior to therapy (Strupp, Fox, & Lessler, 1969; Sifneos, 1978; Keithly, Samples, & Strupp, 1980; Husby, 1985 & Hoglend, 1996).

Although therapists attach considerable importance to the concept, its meaning remains ambiguous. It may refer to the patient's stated interest in psychotherapy as a treatment



method, or it may instead reflect the therapist's judgement that the patient is inwardly distressed and concerned about his own problems (Raskin, 2006).

Despite its apparent importance in psychotherapy (Prochaska, Wright, & Velicer, 2008), motivation has not received strong support in the field of research and several reviewers have concluded that at this point, research findings related to outcome are far from definitive (Garfield, 1994; Orlinsky; Grawe & Parks 1994). The inconsistent results are probably due to different patient samples, treatment modalities, the amount of treatment received, assessment procedures and, as mentioned above, the different concepts of what constitutes motivation.

In the present study, motivation is measured based on the patient willingness to give up maladaptive behavior, as operationalized in the ATOS.

## **Affect**

### *Classification of emotions*

The role affect plays in therapy and how it relates to outcome has primarily been investigated by grouping together affect as either positive or negative. Research reviews focusing on efficacy with this categorization of affects have yielded varied results (Orlinsky, Ronnestad & Willutzki, 2004). A possible explanation for the mixed findings may be that the affects' relation to outcome was influenced by the way they were grouped together. Drawing on often cited classifications on affect from Barrett and Campos (1987), Frijda (1986), Izard (1977), Lazarus (1991), Sroufe (1996) and Tomkins (1962, 1991), Cole, Martin and Dennis (2004) define emotions as "biologically prepared capabilities that evolved and endured in humans because of their extraordinary value for survival. [affects] are a kind of radar and rapid response system, constructing and carrying meaning across the flow of experience. [affects] are the tools by which we appraise experience and prepare to act on situations." This definition underscores affects' functions as response tendencies, preparing the individual to express or inhibit behavior. Merely classifying affects to be either positive or negative does not acknowledge this aspect of affects. Further, one family of affects can be used adaptively or maladaptively, depending on the manner in which it is expressed and the situation it is expressed in. According to McCullough et al. (2003), adaptive emotion expression can be understood as the ability to integrate and balance emotions in accordance with the individuals experience as well as the situational context. This is important in that therapists need to intervene differentially in response to different types of emotional processes. Not paying attention to the function the affect serves in a specific context can dilute its relation to

outcome (Greenberg, 2008). For example, frustration, anger, shame, and pride motivate individuals in different manners, and failure to distinguish the various affects can diminish its association to outcome (Carver, 2002; Carver & White, 1994; McCullough et al., 2003, McCullough & Magill, 2009). In their quest to unravel the complexity of affective functions, some researcher have moved beyond the traditional view of categorizing emotions (e.g. Bonnano, 2004; Dahl, 1978, 1991; McCullough & Magill, 2009). In line with this, the present study separates affects based on their ability to activate or inhibit behavior. Several lines of research lend support to this classification of emotions, including physiological (e.g. Lang 1994), neurological (e.g. Sutton & Davidson, 1997) and behavioral (e.g. Carver & White, 1994). The activation- inhibition distinction also allows for the identification and removal of the confounding factors previously mentioned, which might arise with other methods of classifying emotions (McCullough et al., 2003).

#### *Activating -and Inhibitory affects*

Different affects were separated into discrete affect families by Tomkins (1962, 1993, 1991), and shown to be valid cross-culturally by Ekman (1993). Stemming from this research, several researchers have investigated and classified affects based on their ability to activate or inhibit behavior (e.g. Carver, Sutton & Scheier, 2000; Carver & White, 1994; Gray, 1976; Lang, 1994; Sutton & Davidson, 1997).

As indicated by the term, ‘inhibition’, such affect motivates patients to withdraw and suppress action (McCullough et al., 2003). According to McCullough et al. (2003), feelings of guilt, shame, anxiety, pain, as well as freezing or paralyzing forms of fear, all qualify as forms of inhibitory affect. Dysregulation of affect can be understood as absence or highly elevated levels of these inhibitory feelings in relation to the activating affects. Activating affects include grief, anger, positive feelings for self, closeness, “fleeing” forms of fear, joy and interest (McCullough et al., 2003). Based on the theory of STDP, both activating and inhibiting affects would need to be in balance with each other in an adaptive system, thereby guiding the individual. However, an imbalance of the levels of inhibition with respect to activation, either too little or too much, marks a maladaptive system, characterized by either restricting action or acting out.

According to the analysis of resting metabolic rates and brain structures, certain disorders, such as depression, anxiety, PTSD, and sociopathy, appear to be associated with abnormal affective appraisal and cognitive control systems (Drevets, 2000; Rauch, Savage,

Alpert, Fichman, & Jenke, 1997). Gross and Levenson (1997) find that more than half of the non-substance abuse Axis I disorders, and all of the Axis II disorders in DSM-IV, involve some form of emotional dysregulation. Bringing the affective system into balance therefore seems to be an important goal of therapy.

In the present study Activating and Inhibitory affect is measured by observable physiological signs or behavior, as well as the patient's verbal statements regarding the affect. These indicators provide data for the measurement of the intensity of arousal.

### *Emotional Arousal and Expression*

Mounting research is demonstrating the value of increasing emotions for promoting lasting change, and there is a lot of evidence supporting the effectiveness of arousal of and exposure to previously avoided feelings as a mechanism of change (Burum & Goldfried, 2007; Diener & Hilsenroth, 2006 & Greenberg, 2008). Kendall and Hedtke (2006) have demonstrated this through their study of exposure treatments for anxiety in youth and adults. Emotional expression has also been shown to be a unique therapeutic aspect of emotional processing that predicts adjustments to breast cancer (Stanton et al., 2000), as well as in resolving interpersonal problems (Greenberg & Malcom, 2002). In a series of studies on behavior exposure, results have indicated that emotional engagement during imaginal exposure to trauma memories, predict better outcome over the course of therapy when it occurs in; 1) early sessions (Pavio, Hall, Holowaty, Jellis & Tran, 2001; Pavio and Nieuwenhuis, 2001), 2) during the first exposure and habituation (reduced distress), 3) and during exposure in and of itself (Foa and Jaycox, 1999; Jaycox, Foa & Morral, 1998). Such findings may indicate that emotional arousal during imaginal exposure is a partial mechanism of change.

Despite these results, there can be no universal rule in connection with the effectiveness of arousing emotions or evoking emotional expression. The efficacy in therapy depends on among other things: whether the client's emotions are over- or under regulated and whether the emotion indicate either distress or working through distress (Greenberg, 2008). The role and usefulness of arousal is also found to be dependent upon many factors, such as the emotion expressed, by whom, about what issue, how it is expressed, to whom, when and under what conditions, and in what way the emotional expression is followed by other experiences of emotion and meaning derivation (Whelton, 2004).

Different concepts about intensifying affect are used in the literature, such as emotional arousal, deepening of emotions, activation of affect, experience etc. In this study

the terminology “affect activation and expression” for such activations is used. Where affective activation represents the inner physiological activation, and affect expression is the measurable verbal or behavior expression of this inner activation (as reported to have occurred of the session). These labels are based on the terms used in the STDP model and ATOS.

### **Aims of the study**

The present study is a single-case study which focuses on psychodynamic process variables as described by the Achievement of Therapeutic Objectives Scale (ATOS) (McCullough et al, 2004). This is a pilot project examining both properties of an instrument for quantitative scoring of observational data and a discussion of substantial processes during therapy. The primary aims of this study are:

- To examine the variance of the process variables. The total variance on the scales is decomposed in variance components for segment, session and their interaction, and the relative size of these components will be compared.
- To examine whether Insight, Motivation, Activating affect and Inhibitory affect as measured by ATOS change during therapy, with emphasis on change both within and across therapy sessions.
- To examine possible sequential relationships among the phenomena measured by the four process variables.
- And finally, to examine if changes during therapy are captured by the four process variables measured by ATOS by comparing quantitative measures to a case description.

## **Method**

### **Dataset and Sample**

This case is part of a previously published randomized controlled trial of the effectiveness of STDP (N=25) and Cognitive Therapy (N=25) for Cluster-C personality disorders (Svartberg et al., 2005), which included videotaping of sessions. The patient was randomly assigned to STDP and this study. The reason for this was so that we could follow the therapy course both through a quantitative method and a qualitative observation, without the knowledge of the outcome affecting the results.

## **The Patient**

The patient was a 45 year old man. At the time of treatment he was married and had three children. He was living with his wife and two youngest children. The patient was diagnosed with Cluster-C, dependent personality disorder. Of the Axis I disorders, he was diagnosed with major depression and social phobia.

The patient appeared depressed and sad, with a somewhat monotonous vocal tone. His main problems concerned his lack of self-compassion and low self-esteem. He was constantly self destructive and viewed himself as socially inept and incompetent, as a father, husband and employee. He stated, "I have never liked myself, and it only becomes worse" and, "If I had met someone like myself, I would not have liked them." As a father and husband he felt that he not had been present enough, and criticized himself for this. At work he felt inadequate. For example, when the employees were told to strike, his response was, "I do a bad job and have no reason to strike." He generally looked at himself as inadequate and helpless, "...no matter what I do, it will be bad."

The patient avoided places and situations where people might evaluate him. Although the patient was an experienced pianist, he never played in front of people, because he was afraid of embarrassing himself and others. If people were to praise him, he would not be able to accept this, and he would believe that they pitied him. In social situations, he kept quiet because he feared that other would discover his lack of knowledge.

The patient had difficulties making decisions and implementing simple things. He explained to the therapist how he could use several days packing a small bag of clothes, and how frustrated he would become on his own behalf. At work he had difficulty initiating and completing work, saying, "...if I start too early I won't get it done, and if I start late I could have done it a long time ago. Why don't I do it earlier? I do not have any pressure on me." He had postponed work-related projects to such an extent that he was then two years behind his deadlines.

The patient's view of others was often characterized by idealizing or devaluing, and could be described as somewhat naïve. On one hand he stated, "Everyone does it better than me" and "I only want to see the good in people." On the other hand, he had a tendency to devaluate other people and characterize them as critical, demanding and stupid. "I despise people who smoke" and, "My mother is stupid." He started devaluing other people because he felt that his school mates, as a child, were better than him. As a consequence, he became devaluing and sarcastic.

In relationship to other people, the patient was afraid to take responsibility for his own life and actions. He was dependent on other people to function properly "...it is like I am nothing in myself. I cannot reach my own opinions." He preferred other to take responsibility, as indicated by him saying, "I am surrendering myself to others." He remained passive in his own life and let the people around him be in charge "I do not care about asking questions concerning routines. I accept things as they are. I do not look for change. I let things run their course and let other decide."

He described communication problems with his wife and how he sometimes refused to talk to her when she did not understand his needs for closeness and confirmation. He missed closeness, but did not reach out for it himself. He did not feel cared for anymore, and was afraid that his wife would leave him, "...I fear being rejected."

His children were very important to him. However, he felt that he had become too passive in their lives as they got older "I have been a bad father towards my children, which has been gnawing at me." He did experience much sadness related to the children moving away for further studies, and felt as if he no longer served a function in the family.

The patient experienced sadness for the life he had been, and was, living. He felt as though he was stepping on the brakes instead of living his life "...I have not been following up my life. I have not taken the opportunities when they have arrived. I feel I have done nothing with my life," he reflected, and continued, "I wish I was a different person."

### **The Therapist**

The therapist was a Norwegian psychologist and seasoned clinician in his mid forties working at a civil service health clinic in Norway. The therapist enrolled a training program in STDP for personality disorders that consisted of a 2-hour video-based weekly peer supervision meetings and two-day supervision seminars with Dr. McCullough. Therapy was systematically reviewed for its adherence to the treatment protocols (Svartberg et al., 2005). The therapy was conducted over a 1-year period, for a total of 40 sessions. All sessions were video -and audiotaped, and lasted approximately 50 minutes.

### **Treatment**

This study was based on 29 sessions of a 40 session weekly STDP. The 11 missing sessions were due to tapes not functioning and therapist not videotaping all sessions. The therapy was part of a previously published randomized controlled trial of the effectiveness STDP and

Cognitive Therapy (CT) for Cluster-C personality disorders (Svartberg et al., 2005). Treatment was carried out in accordance with the Affect Phobia Model, which is based on the hypothesis that affect phobia (fear of feelings) are fundamental issues that need to be addressed in therapy for change to come about (McCullough et al., 2003). This therapy model follows the structure of psychodynamic therapy as outlined by Malan's triangle of conflict (defenses and anxiety block the expression of true feeling), and triangle of person (maladaptive patterns that began with past persons, are maintained in current people and enacted with therapist) (Malan, 1979). In addition to the psychodynamic fundament of the therapy, techniques from behaviorism and cognitive therapy are used to shorten the treatment process. Affect phobias are resolved through graded exposure to the underlying adaptive affect until anxiety subsides and the feelings become tolerable to bear. The therapy entails a strong focus on affects, and look upon affects as the primary change agents (McCullough, 1999). Change occurs through desensitization where the warded off feelings are slowly exposed, and inhibitory responses are prevented. In addition to affective restructuring, therapy aims to restructure the patient's defenses and their sense of self and others, to build self-compassion.

### **Raters**

This study used a random selection of 4 research assistants (RA's) from a larger pool of RA's. The RA's had attended a two-day course on the process instrument, and then started training to achieve reliability. The RA's assessed APA videos that previously had been rated by the developers of the method, and their ratings were compared to the developers' "gold-standard." Master raters of the instrument supervised the training. Reliability was achieved when RA's had an Intraclass Correlation Coefficient (Shrout and Fleiss, 1979) of .50 or above for 10 consecutive measurement points. Higher ICC's were consistently strived for. In this study, the ICC was used to examine the reliability of the RA's, both for single –and average measures. The ICC for single measures was: .63 for Insight, .70 for Motivation, .82 for Activating affects and .94 for Inhibition. For the Average Measure, the ICC was .77 for Insight, .83 for Motivation, .90 for Activating affect and .97 for Inhibition.

The four RA's constituted two teams, and each team assessed half of the 29 sessions. Team one coded sessions 5-8, 14, 19, 20, 28-30 and 36-39, while team two coded session 9-13, 16-18, 25-27, 33-35 and 40. The authors of this article constituted one of the teams in the present study.

## **Process measures**

The ATOS is a research tool that has grown directly out of the clinical work of Leigh McCullough and her colleagues, to evaluate to what extent patients demonstrate having met the treatment objectives of STDP (McCullough et al, 2004). The ATOS scale focuses on whether the patient heard the intervention, felt the adaptive emotion, and then behaved in some way to indicate that the intervention had an impact. Therefore, the ATOS scale is designed to measure the impacts of therapies on the patient from several perspectives, and attempts to identify the adaptive shifts in behavior that occur as a result of treatment interventions.

The ATOS Scale contains seven subscales: Insight, Motivation, Affect activation, Inhibition, New learning, Sense of Self and Sense of Others. These seven ATOS objectives are operationally defined in behavioral language and grounded in data such as patients' verbal reports, vocal tone, behaviors and body posture. The objectives overlap with standard "common factors" in psychotherapy and suggest that ATOS can be used to evaluate psychotherapies across theoretical orientations (McCullough et al., 2004). Before rating each objective, raters identified the predominant affect in focus ("the core affect conflict") of the segment - which is a ten-minute sequence of the session. The session usually consists of five segments. The affects include a list of eight common affects observed in STDP: Anger/Assertion, Sadness/Grief, Closeness, Positive feelings about self, Sexual excitement, Enjoyment, Interest and Healthy fear.

*Insight:* The insight subscale is a composite that is made up of several factors related to insight into the maladaptive patterns of behavior, thoughts and feelings. This includes an awareness of the origin of the maladaptive patterns and how and why they were carried from past to present and, an awareness of how and why they are maintained. The insight subscale measures the degree of clarity and fullness of the verbal description of the maladaptive behavior and conflicted pattern. Higher ratings are given for multiple examples and inferences of past-present links.

*Motivation:* The motivation subscale is a composite that measures the patient's willingness to give up defensive and maladaptive behavior. This is shown through verbal behavior and affective display where the patient expresses dislike, undesirability or sorrow over the cost of their own defences and maladaptive behavior. An example of a rating of low motivation in ATOS would be in patients who express maladaptive behavior as something integral to their sense of self, instead of appreciating how they contribute to maintaining the



maladaptive behavior. Changing the defences from ego-syntonic to ego-dystonic is something that would increase the rating of motivation.

*Affect experiencing:* The activating affects subscale measures the intensity of arousal for the predominant affect in the segment of interest. It is a measure of how much of the previously avoided affect is experienced in the patient. This is based on the intensity and duration of inner affective arousal as shown in vocal tone, facial expression, non-verbal behavior or charged verbal statements. It is not a mere registration of any affective display, but of the peak degree of arousal. The core affect is identified for each segment and when rating the specific affect, a distinction is made between adaptive activating feeling and defensive emotions. An example of defensive expression of activating affects related to positive feelings about self, would be exaggerated and grandiose feelings covering over insecurity. The scale does not measure maladaptive affective arousal, but instead considers it to be defensive use of affect. Experiences of adaptive affects are assumed to bring relief, influence how they view and represent themselves, and make relations closer (McCullough et al., 2003).

*Inhibition:* The inhibitory affect subscale is a composite scale that measures the intensity and duration of a group of inhibitory affects including shame, guilt, anxiety or pain shown in verbal report, vocal tone and non-verbal behavior. Raters pay attention to physiological signs of inhibition such as blushing, trembling, restlessness, clenched fists, sighs and tears, as well as verbal statements of discomfort. The inhibitory affect subscale is the only subscale rated in reverse; that is, higher levels indicate higher levels of inhibitory responses.

Seemingly, the constructs being operationalized broadly, allow them to capture many aspects that are thought to be relevant for clinical change. The behavior observed need not be interpreted in a theoretical frame, in such a way that the generalization of the instrument increases. This also helps to increase the possibility of replication.

The ATOS scale has been proven psychometrically sound, showing moderate to excellent reliability in five reliability studies conducted in three countries: USA, Norway, and Italy (McCullough et al., 2004). In these studies the ATOS scale was used to assess patient responses in videotaped STDP and it showed a clear dose response relationship between training on scales and reliability.

### **Outcome measures**

Outcome was assessed by a battery of self-report measures. To measure the level of symptom severity, the Global Severity Index of the Symptom Check List -90 (SCL-90; Derogatis, 1983) was used. In order to assess the patient's problems with assertiveness, intimacy, sociability, control, responsibility and submissiveness, the full version of the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureno and Villasenor, 1988) was administered. The Millon Clinical Multiaxial Inventory (MCMI; Millon, 1984) was also included in the battery, to assess personal pathology in which avoidant, dependent-submissive, compulsive-conforming and passive-aggressive, are core characteristics of Cluster-C personality disorders. The outcome measures consisted of a pretest, a measure halfway through treatment, and another at termination. Follow-up measures were conducted 6 months, 1-year and 2-year after treatment end.

### **Procedures**

For the ATOS ratings, videos of psychotherapy sessions were reviewed in ten-minute segments, where ratings were made at the end of each segment, on a subscale of 1 – 100 for the main treatment objectives. After independently rating a segment, the rates had to come to a consensus score.

### **Statistical procedures**

Reliability was estimated by agreement between two trained observers, and estimated by the Intraclass Correlation Coefficient (Shrout and Fleiss, 1979). Raters were blind to outcome.

To examine change during therapy, process measures were collected both within therapy sessions (each session was divided into five to eight ten-minute segments) and across therapy sessions. This implied a segment by session two-way ANOVA design, with one observation in each cell. The total variance in observations was decomposed in three possible sources: Main effects of segment and session, and a segment by session interaction.

The change in process measures were examined by fitting linear regression models to data, modeling each process measure as a function of "time." "Time" was analyzed both at the segment\*session (n=number of segments\*number of sessions) level and at the session level (n=number of sessions).

To examine possible "sequential" relationships among the phenomena measured by the four process variables, the time-ordered relationship among the process variables had to

be examined. To accomplish this, new “lagged” variables were created from the original observations, giving the following data structure:

<b>A0</b>	<b>B0</b>	<b>A1</b>	<b>B1</b>
<b>1</b>	<b>A</b>		
<b>2</b>	B	<b>1</b>	A
<b>3</b>	<b>C</b>	<b>2</b>	<b>B</b>
4	D	3	C
5	E	4	D
6	F	5	E
		6	F

**Correlations:**

*A0,B0            Same time correlation*

*A1,A0            Lag 1 auto-correlation*

*B1,A0            Lag1 cross-correlation (used for predicting A from B)*

*A1,B0            Lag1 cross-correlation (used for predicting B from A)*

In time-series data, the statistical assumptions concerning independence in residual terms are often invalidated, possibly leading to gross underestimation of the probabilities of type I errors in statistical inference. These assumptions are only valid when all serial dependence has been modeled. The Durbin-Watson (D-W) statistics was used as an index of first-order dependencies in residuals. The exploratory nature of the present pilot study taken into account, the primary has been on analyses of observed data and descriptive statistics, not on inferential statistics. Necessary information for statistical inference is presented but used with caution as the D-W statistic usually indicated serial dependencies.

## **Results**

### **Assessments of variations and change in the process variables over time.**

To assess the variations in the process variables over time, a two-way ANOVA design was used. The dependent variables were the four process variables, with segment and session as independent variables. The analysis was conducted to examine the relationship between each of the process variables with respect to segment, session, and segment by session interactions.

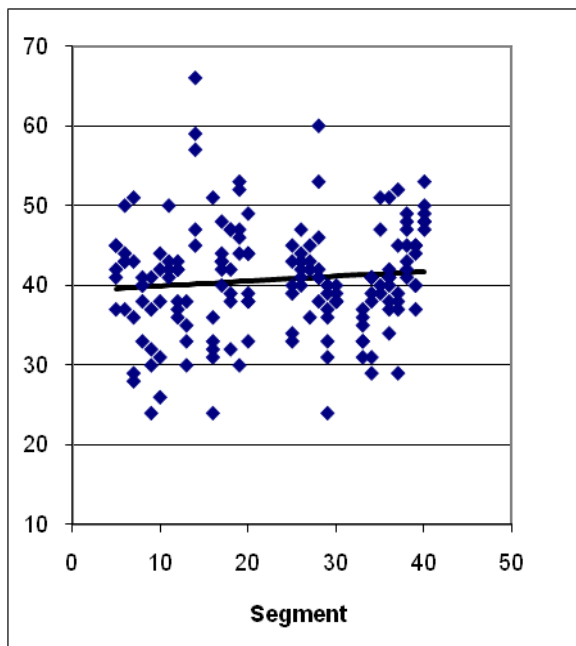
Table 1: Total variance in observed measures decomposed in session, segment, and session by segment interaction effects.

	$R^2$ ( $\eta^2$ )		
	Session	Segment	Ses*Seg
INSIGHT	<i>0.46</i>	<i>0.02</i>	<i>0.51</i>
MOTIVATION	<i>0.63</i>	<i>0.02</i>	<i>0.33</i>
ACTIVATION	<i>0.52</i>	<i>0.04</i>	<i>0.45</i>
INHIBITION	<i>0.92</i>	<i>0.00</i>	<i>0.05</i>

The eta squared shows that most of the variation in the process variables is due to session-effects, while segment-effects are weak. This indicates that most of the variation of the process variables is between sessions, and that there is little variance across the segments within a session. Moreover, by looking at the interaction of segment by session, the results show that the specific pattern of change observed in a session vary a lot throughout the therapy. This counts for all of the process variables, except from inhibition, which shows a very stable pattern of in-session variation.

The pattern of changes in the process variables, both at segment by session, and session levels, are illustrated in the following scatter-plots. The Y-axis represents the level of activation in the specific process variable and the X-axis represents time (segment or session).

Insight



Insight

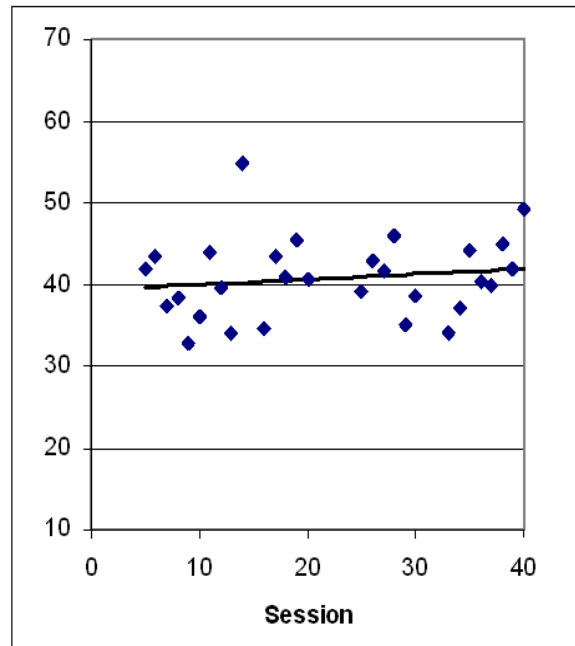
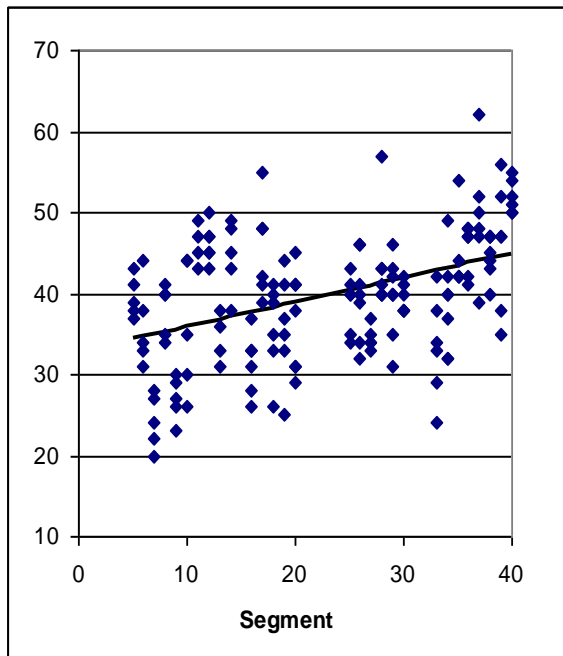


Figure 1 and 2: Best fit linear regression line for the relationship between Insight and segment/session for a patient who completed 29 sessions of a STDP treatment

Motivation



Motivation

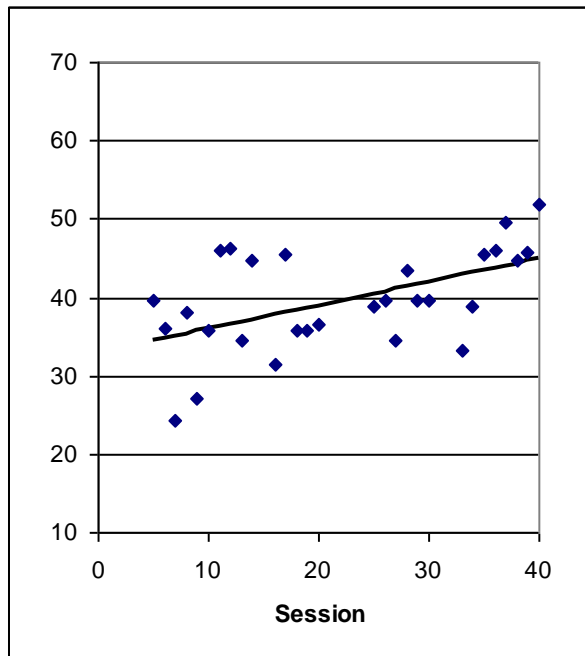
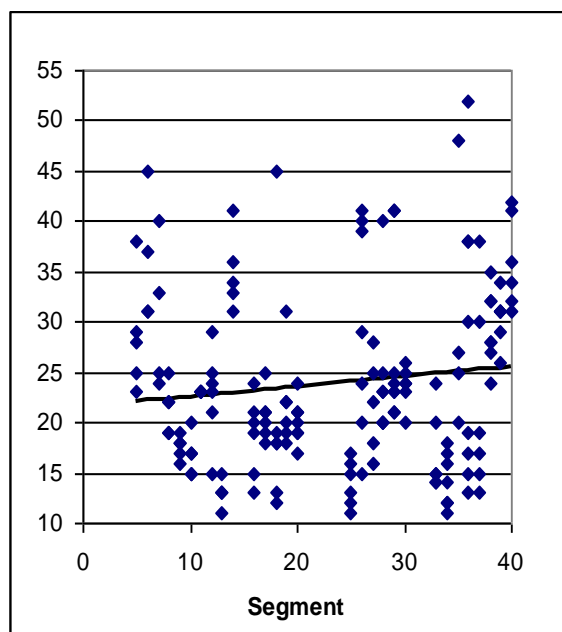


Figure3 and 4: Best fit linear regression line for the relationship between Motivation and segment/session for a patient who completed 29 sessions of a STDP treatment.

Activating affect



Activating affect

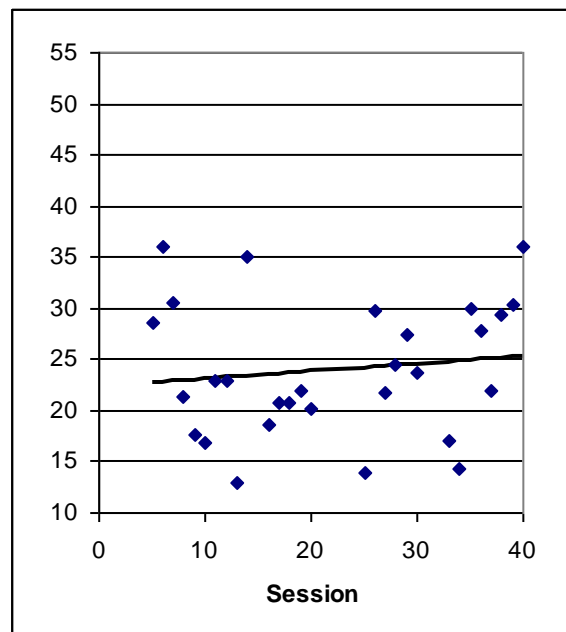
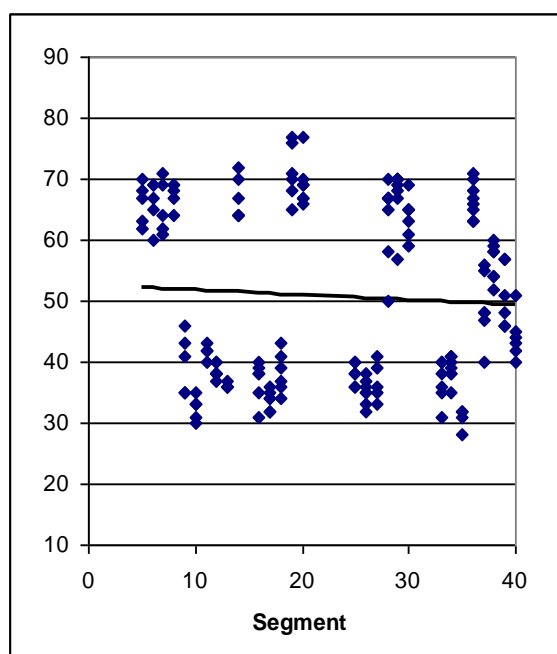


Figure 5 and 6: Best fit linear regression line for the relationship between Inhibition and segment/session for a patient who completed 29 sessions of a STDP treatment.

Inhibition



Inhibition

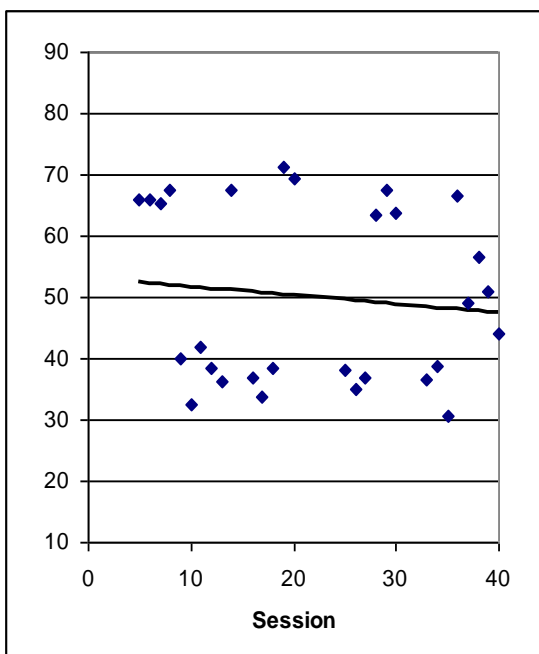


Figure 7 and 8: Best fit linear regression line for the relationship between Inhibition and segment/session for a patient who completed 29 sessions of a STDP treatment.

Table 2: Parameters estimates from linear regression analyses (n= segment by session).

	INSIGHT			MOTIVATION			ACTIVATION			INHIBITION		
	<i>Coeff</i>	<i>t</i>	<i>P</i>	<i>Coeff</i>	<i>T</i>	<i>p</i>	<i>Coeff</i>	<i>T</i>	<i>p</i>	<i>Coeff</i>	<i>t</i>	<i>p</i>
Constant	39.38	37.47	0.00	33.77	31.82	0.00	21.66	16.09	0.00	51.58	22.93	0.00
Time	0.02	1.49	0.14	0.07	6.59	0.00	0.03	1.91	0.06	-0.01	-0.46	0.65
R <sup>2</sup>	0.01			0.21			0.02			0.00		
N	169			169			169			169		

Table 3: Parameter estimates from linear regression analyses (n= sessions).

	INSIGHT			MOTIVATION			ACTIVATION			INHIBITION		
	<i>Coeff</i>	<i>t</i>	<i>P</i>	<i>Coeff</i>	<i>T</i>	<i>p</i>	<i>Coeff</i>	<i>T</i>	<i>p</i>	<i>Coeff</i>	<i>t</i>	<i>p</i>
Constant	39.29	19,57	0.00	33.01	14,29	0.00	22,33	8,30	0.00	53,07	8,89	0.00
Time	0.07	0,83	0.42	0.30	3,20	0.00	0.07	0,68	0.50	-0.14	-0.59	0.56
R <sup>2</sup>	0.03			0.28			0.02			0.01		
N	29			29			29			29		

The results presented in table 2 and 3 show that only Motivation (n= segment by sessions,  $R^2 = .21$ ,  $p < .05$ ) and Motivation (n = session,  $R^2 = .28$ ,  $p < .05$ ) show a significant linear increase.

### Temporal time ordering of the process variables

Before conducting Time-Series Analysis, the presence of same-time correlations was examined. The result is presented in table 4, and show that Insight-Motivation/Motivation-Insight (0.55), Insight-Affect activation/Affect activation-Insight (0.48) and Affect activation-Motivation/Motivation-Affect activation (0.42) show a moderate correlation, while Inhibition only show a low correlation with the other variables.

Table 4: Same-time correlations

	INSIGHT <sub>0</sub>	MOTIVATION <sub>0</sub>	ACTIVATION <sub>0</sub>	INHIBITION <sub>0</sub>
INSIGHT <sub>0</sub>	1.00	0.55	0.48	0.12
MOTIVATION <sub>0</sub>	0.55	1.00	0.42	-0.04
ACTIVATION <sub>0</sub>	0.48	0.42	1.00	0.24
INHIBITION <sub>0</sub>	0.12	-0.04	0.24	1.00

An analysis of concomitance in time-series data was performed in order to examine the sequential relationship between the variables at segment level. The analysis was performed to

examine if any of the variables were sequentially related to each other from segment to segment within sessions. In time-series analysis, one aim is to infer a causal relationship between observations constituting one series of data points and observations of a second series (Kivlighan et al., 2000). The relationship between two series is the cross-correlation function (CCF). For example, a lagged cross-correlation function of patients Activating affects and Insight, is derived by pairing the patients Activating affects at session 1 with the Insight rating at session 2. This procedure was conducted for all of the process variables included. Time-series analysis involves two steps. In the first step, each individual time-series is examined for the presence of autocorrelations and correlated error. Autocorrelation is the correlation of the process variable with itself.

The following two tables are asymmetrical, and should be read column-wise. In table 5, the correlation between Insight at time 0 and Motivation at lag 1 is .29, while the correlation between Motivation at time 0 and Insight at lag 1 is .33. In other words: column variables (<sub>1</sub>) predict row variables (<sub>0</sub>).

Table 5: Cross Lagged Correlation (CLC): bivariate correlation

	INSIGHT <sub>1</sub>	MOTIVATION <sub>1</sub>	ACTIVATION <sub>1</sub>	INHIBITION <sub>1</sub>
INSIGHT <sub>0</sub>	0.44	0.29	0.35	0.20
MOTIVATION <sub>0</sub>	0.33	0.68	0.29	0.00
ACTIVATION <sub>0</sub>	0.40	0.31	0.67	0.24
INHIBITION <sub>0</sub>	0.20	0.06	0.34	0.95

The correlation coefficients presented in table 5 are bivariate correlations and thereby also standardized regression coefficients from fitting the linear regression model:  $Y_0 = a + c \cdot X_1$  to data. The co-variation of each measure with every other measure when controlling for autocorrelation was analyzed by fitting similar linear regression models to data. All these models were of the form:  $Y_0 = a + b \cdot Y_1 + c \cdot X_1$  - where 0 signifies an observed point in time and 1 observations at "lag 1" (the previous point in time). Standardized regression coefficients (the coefficient 'c' in the model described above) from these analyses are presented in tables 6.



Table 6: Cross Lagged Correlations: Standardized regression coefficients  
n=nu. of segments\*nu. of sessions (169). Bold front:  $p < .05$

	INSIGHT <sub>1</sub>	MOTIVATION <sub>1</sub>	ACTIVATION <sub>1</sub>	INHIBITION <sub>1</sub>
INSIGHT <sub>0</sub>			0.06	<b>0.18</b>
MOTIVATION <sub>0</sub>	-0.08		0.06	-0.01
ACTIVATION <sub>0</sub>	0.10	0.08		0.06
INHIBITION <sub>0</sub>	<b>0.07</b>	0.05	<b>0.08</b>	

The results presented in table 6 show three significant sequential relationships. Affective activation predicts Insight and Inhibition, while Inhibition predicts Insight.

### Detailed Review of the Case

The observation of the patient starts at session five. Here, the patient seemed depressed, resigned and highly unmotivated for therapy. He began the therapy session by saying that there was nothing in particular that bothered him and that he did not have anything he wanted to talk about. The patient seemed passive, and he kept the therapist at a distance with the use of irony. The patient stated that he was not aware of his own needs and that he never really had paid attention to them. Furthermore, he stated that he felt worthless and that no one cared about him. He said this without being emotionally affected and seemed to have accepted this as a fact. An important observation was that the way he acted in therapy seemed equivalent to his way of relating in the outside world. He was passive, afraid of failure and rejection “I am afraid of not mastering therefore I do not do anything at all.” “By doing nothing I do not risk to fail.” This passivity was present in therapy as he was taking up a waiting attitude for the therapist to run the therapy. Midway in therapy he stated “...I feel so irresolute in relation to this therapy. I might have had too high expectations. I am failing therapy because I have become more dissatisfied with myself.”

From session eight and onward, the patient’s strong lack of positive feelings for self emerged. In this session he was strongly criticizing himself. He expressed how he despised himself and feelings of social inadequacy and unworthiness. He spoke of a self-loss in the company of others, and that he experienced this as very painful. The therapist tried to regulate this by being understanding and by showing compassion. The therapist further validated the patient’s pain and stated that this was not something he deserved. The patient rejected the therapist’s understanding and continued his self-criticism. The therapist asked how his self-

view emerged. The patient explained that it was just because he was no better. This session was somewhat pivotal in that the patient was more open and was able to focus more on himself. He was seemingly upset anxious and eventually he pulled back and became silent.

The fifteen following sessions, the therapist focused on defense restructuring and relinquishing, where he explored the patient's view of himself and which function the patient's self-instructions served. The therapist asked the patient if he noticed that he steered away from feelings and why he did this. The patient agreed to this avoidance but he did not know which feeling to attach to it, "I don't know what to call it."

Much of the focus in the therapy treated the subject of making the patient acknowledge how he had been protecting himself from rejection and failure by being passive, self-critical, avoidant of relationships and emotionally distant. The therapist was not as challenging in the initial 15 sessions of therapy as he was being supportive and tentative. He followed the patient slow pace as the patient was highly inhibited. As the therapist tried to explore conflict-laden themes, the patient got defensive and distant from his own experiences. Often, the patient told stories from other people's lives instead of his own experiences, and his descriptions were formal and descriptive. He tended to repeat his stories, which were emotionless reminiscences from his high school years and the time when his children were younger and in need of their father. These were the days when he felt that he mattered and he was being less critical of himself. These were safe subjects for the patient to discuss. His stories often include long vignettes about college friends. The therapist often tried to relate these scenic descriptions to the patient's own experiences, but without much effect.

The patient was very rigid in his way of understanding himself and the world around him. Recurrent for the therapy was a low level of insight, and it was the therapist who introduced the subjects, the assumptions and the interpretations. The patient was often replying with statements such as "I don't 'know'" or rejected the therapist's interventions without being able to opening up for new ways of looking at his situation. He was certain that he would always be the way he was. Often he expressed a lack of faith in that he would ever change. He seemed to have given up the promise of therapy and was uncertain that he would ever benefit from therapy.

The therapist focused on making the patient see his maladaptive pattern and how this had affected his life. The patient experienced much shame in having his maladaptive patterns pointed out by the therapist. Much of the focus of the sessions was about the overwhelming shame he experienced. A progress during the treatment was that the patient increasingly developed a language for his feeling of shame, and became able to talk about it. In the first ten

sessions his defenses stopped him from even admitting to any experience of shame. The patient eventually opened up for seeing how shameful he was, “I have enough shame on my plate” and “the shame is indeed apart of me.” He was also not aware of the negative consequences of shame, when the therapist pointed out to him, “The shame is driving your life,” the patient replies, “Is that necessarily a bad thing?” In order to make the patient be aware of his defensive behavior, the therapist midway in treatment, challenged the way the patient used his language. The language was bureaucratic and distanced. The therapist launched the idea that the use of language was often a protection against feelings and a way to distance oneself from threatening situations in therapy. This was highly anxiety provoking for the patient and his inhibition rose. He was not able to explore this, and replied that this way of speaking felt the safest.

The patient’s lack of positive feelings for self, became increasingly obvious as therapy unfolded. Increasingly, the patient also saw how he treated himself, but he still felt undeserving of compassion. The brief feelings of self-compassion became overwhelming. As therapy evolved, he was increasingly developing a depressive attitude where he was not explorative. This could be due to the patient being more ashamed and inhibited as his defenses were being pointed out. Session fourteen was a pivotal session as the patient himself introduced an assumption. As he had gained insight in therapy, he realized that he had been protecting his mother. He said, “I now see that I have gone to lengths to protect her (his mother) from any criticism.” He admitted to being neglected by his mother. Moreover, he felt a deep longing for his parents’ affection, which he felt he was deprived of. He experienced self-compassion but this was quickly interrupted by self-criticism. The therapist soothed and supported him in that such a longing must have felt painful. Even though it was only a low degree of activation of compassion for self, it was higher than in previous sessions. Overall, the emotional content of the sessions varied, from no activation to moderate activation.

The therapy ran its course and the patient was still avoidant and highly self-critical. The therapist often used an emotional language to evoke compassion for self. This seemed to evoke feelings in the patient. However, this was often coupled to highly inhibitory reactions from the patient to such an extent that inhibition was deadening the expression of affect.

Toward the end of treatment the patient had not evolved much and was still communicating a passive and negative view of the outcome of therapy. The style of the two participants had evolved into the therapist taking charge and dominating the sessions. It was the therapist who was the driving force of the session. He used long verbalizations that focused on emotional matters. The patient did not have the opportunity to say much, and was

even interrupted by the therapist. The patient often felt misunderstood and informed the therapist of this. The patient interrupted a long silent break, “I feel that you sometimes misunderstand me.”

The last five sessions the patient showed more signs of increased insight and activating affects. The patient seemed more ready to explore the affect laden- topics and to a larger extent tolerated an emotional language. The patient admitted to a new understanding, “I have never understood that feelings are important, I have not previously understood your questions about feelings. I have never cared to pay attention to feelings, I have not been thinking this way before.” This insight came across in the following sessions as he became more open for emotional experience. His previous brief crying was more sustained and he became more able to feel sorrow for what he had given up and for not ever having felt compassion for himself. The therapist became more focused on exposing the affects and, unlike the earlier sessions, the patient was willing to explore affective experiences. However, the affective activation he experienced in therapy was confusing to him and he was still experiencing shamefulness in feeling of self-compassion “If you have never been strong, you are not in a position to ever be weak either.”

In the penultimate session, the patient introduced the therapy relationship as a matter of focus in therapy when he asked the therapist how he felt about him and how he experienced working with a patient like him. “How do you feel about talking to a patient like me?” The therapist asked what the patient meant when he said “a patient like me.” The patient believed that he was difficult to deal with, in that he often fell out of the conversations and had trouble responding to the therapist’s questions. The therapist asked if the patient ever got angry with him for asking difficult questions, and the patient denied. After asking the question, the patient admitted to being shameful and that he knew from the start that he would self-disclose by asking the therapist this question. The patient somehow felt that he was caught in a trap when he self -disclosed, something he was not used to do. However, he explained that he did ask because he wanted to move out of his comfort zone. The therapist validated the patient’s feelings of ambivalence around introducing the question of the therapeutic relationship. Instead of letting the subject slip away, together they explored the patient’s experiences of therapy. The patient communicated that raising a question like this in a social arena would be unpleasant and a situation he normally would have avoided, “I never let myself be on thin ice.” It was with great sadness the patient ended therapy, and he stated that he was afraid he would not manage to change without the help of the therapy.

Improvement in therapy was overall less than optimal in that the patient did not feel ready to end therapy, and he had just started to show signs of opening up. There were some indications of change at micro-levels during the last five sessions of treatment, where the patient displayed small abrupt moments of compassion for self, insight in own maladaptive patterns, and motivation for change. The patient was becoming more affectively involved and less inhibited. The termination of the therapy might have come too early. However, these achievements were brief and the sessions were still characterized by passivity.

Table 7: Outcome measures

Measures	Admission	Discharge	2 year follow- up	Cut off Scores for normal samples
SCL 90 GSI	0.39	0.52	0.32	1
IIP – Global	1	1.17	1.26	0.88
MCMI	174	179	186	74

The patient showed no reliable improvement or reliable change between admission, termination, and at 2-year's follow-up based on Jacobsen & Truax's Reliable Change Index (RC) (1991). The results showed no statistical significant change, and no clinical significant change. The scores of SCL-90 were never in the clinical range during therapy, while IIP and MCMI scores remained in the clinical range across therapy and at 2 years follow- up. The RC was calculated by the standard error of the two differences between the test scores:  $[2(SE)^2]^{1/2}$ , where  $SE = [1 - r_{xx}]^{1/2}$ .

## Discussion

This study has examined the change in specific processes variables during STDP using quantitative and qualitative methods. It has also examined if any of these variables are sequentially related to each other. This is based on a single-case study, where the patient was diagnosed with Cluster-C dependent personality disorder, major depression and social phobia.

### Therapeutic change

At segment level, only a small variance is observed, indicating that the process variables

do not fluctuate systematically within sessions. This is especially true for Inhibition, which is remarkably stable across the segments within a session (table 1). The results are in line with the clinical impression, where we observed that the patient did not shift much within sessions. The initial phase of the sessions was often predicative of how the rest of the session would be. For example, if he began with low levels of insight, the rest of the session was characterized by low levels of Insight.

A strength of this study is having repeated measures within a session, without the inference of outside sessions effect. Despite this advantage, the short time intervals may explain the weak segments effects reported. One explanation for this might be that the different processes need more time to develop within a session. On the other hand, it might be that there are changes at the variables at segment level, but that the statistical method are not sensitive enough to catch these patterns. The strongest variance in the process variables is at session level, which indicates that the process variables fluctuate more across sessions, reasonably because of longer time periods (table 1).

It was initially hypothesized that this patient needed time to incorporate the effects of treatment between sessions. However, it was not found a strong linear increase over time, most changes were small. Motivation was an exception, showing a steady increase over time. Activating affect also increased somewhat during therapy, while Inhibition showed some decrease (figure 1-8). These findings were expected based on the STDP's treatment objectives. Despite the changes, the amount of overall change was low during the whole therapy. This was somewhat surprising due to the intense focus on affect and anxiety regulation by the STDP therapist. One of the reasons for this may be due to the patient's low motivation, he does not seem to want to be actively engaged in the therapy. He stated that he looked at the therapy as a "resting-pillow." In addition, the patient was afraid of becoming overwhelmed by affects so he avoided affect activation, stating, "I become paralyzed," and "I prefer to have distance to feelings, "as well as, " I am afraid of the sadness."

Insight would be expected to increase linearly (Grenyer & Luborsky, 1996; Kivlighan et al., 2000; Kallestad et al., *in press*) or curvilinear (O'Connor et al., 1994) over the course of therapy. Kivlighan et al. (2000) have suggested that when global measures of insight are used, patients seem to be increasingly more insightful as treatment progresses. Even though the ATOS operationalizes Insight broadly, this was not observed in this study. Some patients would not want to see and give up their defensive pattern because change can seem overwhelming (McCullough et al., 2003). Having the therapist challenge the patient's long-

held beliefs may have been threatening to the patient's sense of identity and stability, thus he maintained the low levels of insight.

The use of regression data has helped in charting overall trends of this specific treatment. However, the changes during therapy cannot be interpreted as being a result of treatment. It is important to remember that denoting change is different from understanding the basis of change. Treatment could be responsible for change, yet several alternative interpretations of the case might be proposed. At this point, the findings from the study only provide us with observations of the patterns of change over the course of therapy.

When exploring the findings from this study however, it is important to bear in mind that the patient became more symptomatic and more dysfunctional at 2-year follow-up, thus not a reliable change (table 7). This may better explain the pattern of change and why the expected objectives were not better achieved. By the end of a 40-session therapy, the patient was still characterized by low levels of Insight, Motivation, and Activation affects, and high levels of Inhibitory affects. The achievement of STDP objectives is correlated with a positive outcome (Svartberg et al., 2005). In light of this, the findings of this study are not as surprising, and they may add support to the necessity of having the patients absorb the treatment objectives for bringing about change in psychotherapy.

There can be several explanations to why the patient in the study did not improve. Data from public clinics shows that not all patients improve, even after years of therapy. Findings suggest that about 50 % of patients do not improve and 10 % even deteriorate (e.g. Lambert & Ogles, 2004.). One possible explanation in this case, may be due to high levels of Inhibition relative to low levels of Activating affect over the course of therapy. Preliminary results on STDP (McCullough & Magill, 2009), suggest that the outcome of therapy is dependent on how the therapist deals with the patient's inhibitory affects. The therapist in the present study was highly focused on the patient's inhibitory affect of shame and anxiety, saying, "You have a lot of shame in yourself, you are ashamed for what you did," and "...your anxiety must be overwhelming." The therapist may have been focusing too rigidly on these affects. One could clearly see that the patient was struggling to deal with them. The patient might have needed closer work on self-compassion or self-esteem to help reduce the powerful shame related to the self. In addition, the therapist also seemed to work rigidly to the treatment manual, something that has been found to be related to a negative outcome (e.g. Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Hoglend, 1995), in that one could be at risk of ignoring the patient's needs. In such cases, the therapist may try to fit the patient into a

model, instead of adjusting the model to the patient (Roth and Fonagy, 2006). However, we had no measure of these therapeutic variables.

Another explanation of why treatments fail is due to lack of proper motivation (Raskin, 2006). This has been used to explain failure to enter, continue in, and succeed in treatment ever since the early days of psychoanalysis. Lack of motivation has been attributed to patient characteristics, like a personality trait, resistance and overuse of defence mechanisms such as denial (Miller, 1985). By observing the course of therapy, although motivation increased over time, one could see that the patient was in some sort of denial. How he was trying to hold on to the illusion of a good childhood and loving, caring parents serves as good examples, “Poor mum, she struggled a lot with me when I was ill” and “...she did the best she could.” It may be that when the therapist was focusing on sensitive subjects, the patient’s motivations also decreased. As noted above, at the end of therapy the patient became more open and less rigid. The results show that the patient’s motivation increased at the end of therapy, which can be assumed to be a result of the patient’s letting go of his defences “ I want to change, “ he said. “I can see how the shame has affected me, my head is full of shame.” If this is the case, it supports the belief that the overuse of defence mechanisms is related to low motivation in psychotherapy. A final consideration is that his motivation for change simply came too late in treatment. With his intense levels of shame and self-attack, he might have needed longer treatment, or treatment that focused more intensively on self-compassion in earlier sessions.

In addition to poor motivation, studies have identified that other personality variables may be indicators to negative outcome. Specifically, it has been found that patients, who exhibit high levels of symptoms or high levels of interpersonal disturbance or expect psychotherapy to be painless, may be at risk for deterioration (Mohr, 1995). The patient in this study possessed all these characteristics. He experienced interpersonal problems, low motivation and seemed unprepared for, and initially unwilling, to engage in the intensity and pain that therapy often entails. In line with this, Foa and Steketee (1977) report that patients who do not benefit from treatment were not prepared for treatment-induced emotional arousal or distress. Similarly, Liberman, Yalom and Miles (1973) find that patients who deteriorate initially had unrealistic expectations that their treatment would be safe and pain-free.

Finally, it is important to note that when patients show no improvement or deteriorate, it does not necessarily have to be a result of the therapeutic process in it self. Outcome of treatment may very well be affected by other uncontrolled variables not accounted for by treatment in itself. Care must be taken when trying to draw assumptions from an uncontrolled,



single-case observational design where threats to internal validity are pervasive. As there are no conditions, one knows little about the potential effect of what the patient is doing and experiencing between sessions. A long-term follow-up study is currently being planned so that such questions may be answered ( L. McCullough, personal communication, April 22, 2010).

### **The therapeutic process**

At segment level, there are only small indications of potential sequential relationships in the process variables. The result of the Time-Series Analysis indicated that the level of Activating affect in one segment predict a higher level of Insight in the following segment (table 6).

Research supports a relationship between affect and insight in psychotherapy (e.g. Cautela, 1965; Hill et al., 1992, Wachtel, 1997); i.e., that after experiencing conflicted feelings, greater insight is achieved. The finding of Affective activation predicting Insight is in line with Fosha (2000), who reports that insight comes to patients through their experiencing deepening core affective states in shared experiences with an empathic other. The clinical impression of this particular patient lends support to the hypothesis that affect is present before insight in psychotherapy.

When the therapist was focusing on the patient's lack of positive feelings for self, the patient was able to experience how hard he had been on himself throughout the years. By grieving the restricted lifestyle his self-contempt had led to, he recognized that his low sense of self had affected his children and wife, leading to big disappointments in them. In session 38 the patient says, "I am a pessimist and it affects the people around me," and "...my behavior is a problem for other people." The patient stated that he had never had anyone to share his experiences with, and it felt good to be listened to in therapy. His affective focus was drawn inwards, and he stated that he felt sorrow for the opportunities that he had missed out on in life. This emergence of grief unfortunately came late in the treatment, and he might have needed a longer time to incorporate these feelings and insight.

A somewhat more surprising finding is the relationship between Inhibition and Insight. For the patient in this study, this indicates that the higher levels of Inhibition experienced, predicted a higher level of Insight at the next segment. A high level of Inhibition in certain patients, may lead focus away from the affective experiencing because it is too painful to bear. So instead of paying attention to the affects, some patients may instead start intellectualizing. The therapist in this study was very active toward the end of therapy course,

and he was often focusing on subjects that had been difficult for the patient, especially his intense feelings of shame. The intense focus on shame -and conflicted affects led to high levels of Inhibition in the patient. At the same time he was enlightened by the therapist's interpretations and introductions of past-present links. In this case, it may not be that the patient actually gained insight, but that he rather behaved in a compliant manner. A point worth noting, is that the ATOS is based on observer ratings, and include specific criteria that rates have to follow. Example, Insight below 41 is captured by the patient's agreement of what is pointed out by the therapist and how much he is able to elaborate around this. The patient in this study scored about 35-45 throughout the therapy (figure 2). It may be that the issue of compliance not is sufficiently handled in the ATOS scale before the patients reach a level around 50. Above this level, Insights needs to be spontaneously provided by the patient, and not just repeats of the therapist (appendix).

In addition, it may be that ATOS does not capture the whole concept of insight, which may affect both the level and the relationship found. In the literature, a distinction has been made between intellectual and emotional insight (Crits-Cristoph, Barber, Miller, & Beebe, 1993; Gelso 1991; Gelso, Kivlighan, Wine, Jones, & Friedman, 1997). Intellectual insight can be described as cognitive, where the patient appreciates the cause-effect relationship of his conflicts. Emotional insight includes affect and experiential processing, where the patient's feelings regarding previously avoided material is in focus. The ATOS does not accommodate to this distinction.

The findings reveal only weak support for any sequential relationship between the variables, so only tentative implications can be drawn of how the variables are related to each other within sessions. It is important to keep in mind that the levels of Motivation, Affect activation and Insight were low during the whole therapy, while Inhibition was overall at a high level. Only Motivation, although low, showed a somewhat linear increase over time. From this point of view it can be discussed whether any form of sequential relationships could be expected, due to the overall low levels of and moderate variations in the process variables. Another assumption may be that the levels of the variables need to reach certain levels in order to have any causal effect on each other.

## **Limitations**

The results reported here are taken from an intensive single-case study, and it is uncertain whether they can be generalized to other treatment cases. The changes in process variables

and the sequential relationship between them may well be very different in other cases. The patient under study was diagnosed with Cluster-C personality disorder and it is legitimate to expect that a study of other patient groups would lead to different relationships between the variables.

Moreover, the documentation of the validity of the ATOS is limited. However, several promising studies are underway. Its constructs are admittedly not easy to define in matters suited for research, where Insight especially has been defined in various ways throughout the history. Therefore the construct validity of the ATOS may be challenged. In addition, alternative explanations may account for the status of the process variables, other than what is provided in therapy, and cannot be excluded. For example, the internal validity can be threatened by what happens between the sessions. This treatment spans three years (1 year of treatment and 2-years of follow-up), and many events outside of therapy may have affected how the process variables evolve over time and how they influence each other. It is also important to remember that the ATOS was originally meant to measure change processes observed in STDP. Because of this, the scale may have a “treatment bias” and does not capture the process variables in a way relevant to other modalities of treatment. ATOS has however undergone extensive development to become behaviorally-grounded and atheoretical (Siefert, Defife & Baity, 2009).

Overall, when drawing assumption from the study, it is important to have in mind that the results may be explained as treatment effects, therapist effects and treatment by therapist effects. This study has not singled out these variables.

## **Conclusion**

The search for change agents in psychotherapy is an important endeavour. The study of change and the sequential relationship between process variables is a new and unique way of conducting psychotherapy research. The results from this single-case observational study reports only small linear trends over the course of therapy and some weak, sequential relationship of the process variables within sessions. The fact that the patient showed no improvement at discharge must be taken into account along with the findings.

Comparing the qualitative measure and the quantitative impression from this study, shows that they are highly congruent. This implies that the change during therapy is captured

by the four process variables and lends support to the process variables as a valid measure of change during therapy.

This way of studying micro-processes is innovative, by both including measures every ten-minutes of a therapy session and by looking at the relationship between all four process variables at the same time. Such an in-depth study of change mechanisms paves the way for future research and contributes to a deepening of the understanding of the factors that bring about effective change in psychotherapy.

### **Implication**

A single-case study may contribute to knowledge about treatment effects for a single patient which, may add to theoretical prediction. More studies are needed in order to investigate the relationship between the ATOS variables. This includes those therapies in which the patient improves, is unchanged or deteriorates.

The results regarding the interaction of segment by session (table 1) revealed some interesting findings. For all variables, except Inhibition, within-session fluctuation varied unsystematically across sessions. The inconsistency is striking. However, this study does not provide us with any answers as to why these interaction effects occur. This is due to a lack of other measures than the specific process variables included. An examination of how Insight, Motivation, Activating affect and Inhibition are moderated by other aspects of therapy such as the Working Alliance, the verbal activity of the therapist and level of transference, would be interesting to explore, possibly adding to the understanding of change agents in therapy.

There is a lack of studies evaluating the relationships between important psychotherapy process variables and how they influence each other. The theoretical data regarding which variables are predictors of change at the micro-level is limited and needs more research in order to improve the effectiveness of psychotherapy.

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## Appendix

Short-Term Psychotherapy Research Program at Harvard Medical School

Leigh McCullough Ph.D., Director

**ACHIEVEMENT OF THERAPEUTIC OBJECTIVES SCALE: ATOS Scale**  
**(REPRESENTING WELL-ESTABLISHED COMMON FACTORS IN PSYCHOTHERAPY)**

February, 2003 (Scales as of August, 2008)

**This manual includes:**

**A One Page Brief Overview of treatment objectives in 20-point objectives**

**And more detailed 1-100 Scales for the 7 Treatment Objectives**

**(A catalog of specific examples is currently being developed)**

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**ATOS 1-PAGE BRIEF OVERVIEW – 20 POINT BRIEF RATING GUIDES** 27 Aug 08**The Psychotherapy Research Program at HMS**

Leigh McCullough Ph.D., Director

**AWARENESS OR INSIGHT INTO MALADAPTIVE PATTERNS OF THOUGHTS, FEELINGS, AND/OR BEHAVIORS**

- 81-100 - Excellent recognition of problem patterns. Excellent links to past origin of behaviors. Excellent awareness/insight.  
61-80 - Good recognition of problem patterns. Some description of origins in past, linked to present. Good awareness/insight.  
41-60 - Moderately clear recognition. On own describes occurrence of maladaptive patterns. No references to past. Moderate awareness/insight.  
21-40 - Low recognition. Can see problem pattern only when pointed out by therapist. Little/no elaboration. Minimal awareness/insight.  
1-20 - No recognition of maladaptive behavior patterns, or unsure when pointed out. May mention anxiety without reference to pattern. No awareness/insight or resists awareness/insight.

**MOTIVATION TO GIVE UP MALADAPTIVE PATTERNS OF THOUGHTS, FEELINGS, AND/OR BEHAVIORS**

- 81-100 - Excellent motivation to give up maladaptive patterns. Very strong discomfort, sorrow, openness to change. Little/no resistance.  
61-80 - Strong motivation to give up maladaptive patterns. Strong discomfort, sorrow, openness to change. Low resistance.  
41-60 - Moderate motivation to give up maladaptive patterns. Moderate discomfort, sorrow, openness to change. Moderate resistance.  
21-40 - Low motivation to give up maladaptive patterns. Low discomfort, sorrow, openness to change. Much resistance.  
1-20 - No motivation to give up maladaptive patterns. Ego-syntonic/desirable. "This is who I am." Almost total resistance.

**DEGREE OF INTENSITY OF AFFECTIVE AROUSAL (IN-SESSION EXPOSURE TO PHOBIC AFFECTS)**

- 81-100 - Full experience of emotion, well-integrated. Full grief, full openness/tenderness/trust, full justifiable outrage, full joy, etc.  
61-80 - Strong experience of emotion. Strong affect quickly cut off or sustained but a little held back.  
41-60 - Moderate experience of emotion. Some grief, some anger, some openness/tenderness/trust/care, etc. Some holding back.  
21-40 - Low experience of emotion. Beginning indications of grief, anger, openness/tenderness/trust/care/joy, etc. Much holding back.  
1-20 - Little/no physiological experience of emotion in facial expression, verbal report, tone of voice, body movement. Flat, dull, bland presentation.

**NEW LEARNING: ADAPTIVE EXPRESSION OF THOUGHTS, FEELINGS, WISHES, OR NEEDS**

- 81-100 - Excellent expression of thoughts/feelings; sense of completeness, balance and excellent results. Great relief and satisfaction experienced.  
61-80 - Good expression of thoughts/feelings; slight holding back. Not all expressed, but good sense of relief in speaking up. Good satisfaction.  
41-60 - Moderate expression of thoughts or feelings; moderate holding back, but moderate effectiveness. Moderate relief. Moderate satisfaction.  
21-40 - Beginning attempt to express thoughts or feelings. Much holding back. A little relief in expression. A little satisfaction.  
1-20 - No expression of adaptive thoughts or feelings. Total holding back. No relief. No satisfaction. High end of this rating level: can begin to imagine expressing adaptive thoughts or feelings, wants and needs, but is as yet unable put it into action.

**INHIBITORY FEELING: VERBAL OR NONVERBAL EVIDENCE OF THE OBSERVABLE PRESENCE OF ANXIETY, GUILT, SHAME, OR PAIN**

- 81-100 - Extreme inhibitory affect: e.g., extreme shakiness, hesitancy, vigilance, trembling, anxiety or shame. Extreme uneasiness.  
61-80 - High inhibitory affect: e.g., high levels of shakiness, hesitancy, vigilance, trembling, anxiety or shame. Great uneasiness.  
41-60 - Moderate inhibitory affect: e.g., moderate shakiness, hesitancy, vigilance, trembling, anxiety or shame. Moderate uneasiness.  
21-40 - Low inhibitory affect: e.g., low shakiness, hesitancy, vigilance, trembling, anxiety or shame. Low level of uneasiness.  
1-20 - Little or no inhibitory affect. Little or no shakiness, guardedness, hesitancy, vigilance, trembling, anxiety, etc. Comfortable, at ease.

**IMPROVEMENT IN SELF-IMAGE**

- 81-100 - Highly adaptive sense of self; compassionate and accepting of strengths and vulnerabilities.  
61-80 - Very adaptive sense of self; much compassion and acceptance, but some self-blame or shame present.  
41-60 - Moderately adaptive/maladaptive aspects of self-image in approximately equal amounts.  
21-40 - Very maladaptive sense of self, but a little compassion, and a little ability for acceptance.  
1-20 - Highly maladaptive sense of self, little or no compassion, awareness, or self-acceptance—or excessive grandiosity.

**IMPROVEMENT IN IMAGE OF OTHERS**

- 81-100 - Highly adaptive sense of others. Very much compassion/acceptance/trust in others; little or no idealization or devaluation.  
61-80 - Very adaptive sense of others. Much compassion/acceptance/trust, but some devaluation or idealization.  
41-60 - Moderately adaptive as well as maladaptive aspects; moderate compassion/acceptance/trust, moderate devaluation/idealization.  
21-40 - Very maladaptive sense of others, but some compassion, empathy or ability for acceptance; much devaluation or idealization.  
1-20 - Highly maladaptive sense of others; Little or no compassion, empathy or acceptance. Very much devaluation, idealization or splitting.



## AWARENESS OR INSIGHT INTO MALADAPTIVE PATTERNS

20 Aug08

*STD: Defense Recognition (Noting Patterns of Maladaptive Defenses, Anxieties, and Feelings)*

*CBT: Recognition of Maladaptive Cognitions or Maladaptive Cognitive Schemas*

*DBT: Mindfulness of self-destructive pattern. Degree of dialectical thinking/ behavior observation.*

### MAIN COMPONENTS:

1. Degree of clarity and fullness of verbal descriptions of maladaptive patterns of thoughts, feelings, and/or behaviors, with explicit examples.
2. Degree of ability to state why and how maladaptive/defensive patterns began and are maintained (secondary gain, meanings, causes, and with whom.).

NOTE: Rate higher within each 10-point category for multiple examples, and lower for fewer examples.

### BRIEF OVERVIEW OF AWARENESS OR INSIGHT INTO MALADAPTIVE PATTERNS OF THOUGHTS, FEELINGS, AND/OR BEHAVIORS

- 81-100 - Excellent recognition of problem patterns. Excellent links to past origin of behaviors. Excellent awareness/insight.  
 61-80 - Good recognition of problem patterns. Some description of origins in past, linked to present. Good awareness/insight.  
 41-60 - Moderately clear recognition. On own describes occurrence of maladaptive patterns. No references to past. Moderate awareness/insight.  
 21-40 - Low recognition. Can see problem pattern only when pointed out by therapist. Little/no elaboration. Minimal awareness/insight.  
 1-20 - No recognition of maladaptive behavior patterns, or unsure when pointed out. May mention anxiety without reference to pattern. No awareness/insight or resists awareness/insight.

- 91-100 Excellent recognition of maladaptive behavior patterns. Clear, comprehensive descriptions of maladaptive patterns. Describes clearly and fully how pattern is transferred from past to present (e.g.; learning history or T-C-P links). Also, excellent descriptions of reasons for maladaptive responses, including meanings and secondary gain. Excellent and full awareness/insight.
- 81-90 Very good recognition of maladaptive behavior patterns. Clear, somewhat detailed descriptions of maladaptive patterns. Very good description of origins in past, linked to present. Very good understanding of reasons for maladaptive responses, meanings and secondary gain—but not all aspects mentioned. Very good awareness/insight.
- 71-80 Good recognition of maladaptive behavior patterns. Good but not detailed descriptions of maladaptive patterns. Some description of origins in past, linked to present. Good understanding of reason for maladaptive responses or secondary gain. Good awareness/insight.
- 61-70 High-moderate recognition of maladaptive behavior patterns. Fairly good, general descriptions of maladaptive patterns. Minimal description of origins in past, or links to present. Some understanding of reasons for maladaptive responses or secondary gain. Fairly good awareness/insight.
- 51-60 Moderate recognition of maladaptive behavior patterns. Partial descriptions of maladaptive patterns. No past-present links. No mention why maladaptive behaviors occur or secondary gain. Moderate awareness/insight.
- 41-50 Low-moderate recognition of maladaptive behavior patterns. On own begins to describe maladaptive patterns but only vague or general description without clear examples. No past-present links. No mention of why maladaptive behaviors occur nor understanding of secondary gain. Some awareness/insight.
- 31-40 Low recognition of maladaptive behavior patterns. Can acknowledge maladaptive patterns only when pointed out, but readily agrees when pointed out by therapist—with little elaboration. Lower level: Agrees without reluctance but does not elaborate further. Beginning awareness/insight.
- 21-30 Minimal recognition of maladaptive behavior patterns. Can acknowledge maladaptive behavior only when pointed out, but reluctantly agrees and does not elaborate further. Upper level: Agrees with a little reluctance. Lower level: Agrees with much reluctance or unclear whether the patient agrees or not. The barest evidence of beginning awareness/insight.
- 11-20 No recognition of maladaptive behavior patterns. Does not recognize maladaptive patterns and questions, doubts or does not agree when pointed out by therapist. Seems to lack interest in identifying maladaptive patterns. No awareness/insight. Mention of anxiety or inhibition without understanding of maladaptive pattern is rated here.
- 1-10 No awareness of maladaptive behavior patterns, anxieties or feelings. Does not see maladaptive patterns on own nor when therapist points it out. Upper level: No apparent interest in recognizing maladaptive responses. Lower level: Disagrees or becomes angry/belligerent when maladaptive responses are pointed out. No awareness/insight or resists awareness/insight. No mention of anxiety or inhibition.



## MOTIVATION TO GIVE UP MALADAPTIVE PATTERNS 27 Aug 08

STDP: Defense Relinquishing: Motivation to give up defensive patterns  
CBT: Motivation to give up maladaptive cognitive schemas  
DBT: Motivation to change maladaptive behaviors. Commitment

MAIN COMPONENTS: RATE the MODE over the 10 minute segment.

1. Degree of motivation to give up maladaptive patterns of thoughts, feelings, and/or behaviors.
2. Degree of dislike, undesirability or sorrow specifically about the costs of defenses or maladaptive behavior. (Base ratings on nonverbal or affective display of motivation; e.g. sorrow/grief expressed about having the maladaptive behavior patterns.) NOTE: This is not grief over losses of loved ones, which would be rated as Affect Experiencing if the focus of the segment is grief.

NOTE: The lower the score, the greater the degree of overall resistance to change or the greater the defensiveness to warded-off feeling.

### BRIEF OVERVIEW OF MOTIVATION TO GIVE UP MALADAPTIVE PATTERNS OF THOUGHTS, FEELINGS, AND/OR BEHAVIORS

- 81-100 - Excellent motivation to give up maladaptive patterns. Very strong discomfort, sorrow, openness to change. Little/no resistance.  
61-80 - Strong motivation to give up maladaptive patterns. Strong discomfort, sorrow, openness to change. Low resistance.  
41-60 - Moderate motivation to give up maladaptive patterns. Moderate discomfort, sorrow, openness to change. Moderate resistance.  
21-40 - Low motivation to give up maladaptive patterns. Low discomfort, sorrow, openness to change. Much resistance.  
1-20 - No motivation to give up maladaptive patterns. Ego-syntonic/desirable. "This is who I am." Almost total resistance.

- 91-100 Excellent motivation to give up maladaptive behavior. Expresses (verbally and non-verbally) intense wish to change. Extreme discomfort over maladaptive behavior. Intense grief over costs of defenses. No resistance or defensiveness. Fully open to change.
- 81-90 Very strong motivation to give up maladaptive behavior. Expresses very strong wish to change. Very strong discomfort over maladaptive behavior. Very strong grief over costs of defenses. Very little resistance or defensiveness. Very strong openness to change.
- 71-80 Strong motivation to give up maladaptive behavior. Expresses strong wish to change. Strong discomfort over maladaptive behavior. Strong grief over costs of defenses. Low resistance or defensiveness. Strong openness to change.
- 61-70 High moderate motivation to give up maladaptive behavior. Expresses more-than-moderate wish to change. More-than-moderate discomfort over maladaptive behavior. More-than-moderate grief over costs of defenses. Low-moderate resistance or defensiveness. More-than-moderate openness to change.
- 51-60 Moderate motivation to give up maladaptive behavior. Expresses moderate wish to change. Moderate discomfort over maladaptive behavior. Moderate grief over costs of defenses. Moderate resistance or defensiveness. Moderate openness to change.
- 41-50 Low-moderate motivation to give up maladaptive behavior. Expresses some wish to change. Some discomfort over maladaptive behavior. Some grief over costs of defenses. More-than-moderate resistance or defensiveness. Some openness to change.
- 31-40 Low motivation to give up maladaptive behavior. Agrees that change is needed, and that giving up the maladaptive behavior can be beneficial, but no discomfort reported about having the maladaptive behavior. Doubts own ability to change or fears change. Much resistance/defensiveness or ambivalence. Little openness to change.
- 21-30 Very low or ambivalent motivation to give up maladaptive behavior. Very low desire to change. Acknowledges maladaptive behavior as problematic, but also describes its benefits/secondary gain. Very much resistance, defensiveness or ambivalence. Very little openness to change.
- 11-20 Barely evident motivation to give up maladaptive behavior. Expresses almost no desire to change. Dislikes symptoms, but only acknowledges maladaptive behavior as mildly problematic, if at all. Fears expression of adaptive feeling or feels too hopeless to try. Strong resistance/defensiveness. Almost no openness to change.
- 1-10 No motivation to give up maladaptive behavior. Dislikes symptoms, but accepts, values or desires maladaptive behavior. (Fully desirable or ego-syntonic: e.g., "This is the way I am!"). Resists adaptive expression. Indifferent/masochistic attitude towards self. Almost total resistance or defensiveness. No openness to change.

## INTENSITY OF AROUSAL OF ADAPTIVE AFFECT: IN-SESSION BODILY EXPOSURE TO PHOBIC AFFECTS

27 Aug 08

*STDP: Affect Experiencing: Degree of Bodily Arousal of Adaptive Affects (to desensitize Affect Phobias)*

*CBT: Affect arousal is not a primary focus – and may or may not be present*

*DBT: Mindfulness and management of internal reactions. Emotional modulation vs reactivity. Affect tolerance.*

### MAIN COMPONENTS:

1. Intensity of arousal of adaptive affect (note peak degree of arousal for anger, grief, or excitement and the deepest arousal for joy, closeness, or self feelings). Base the rating on intensity of inner affective arousal as shown in vocal tone, facial expression, non-verbal behavior/movement or charged verbal statements. This is not a rating of intensity of interpersonal expression, which would be rated as Affect Expression/New Learning.
2. Duration of the affective arousal (a few seconds to many minutes).
3. Relief in the experience of the feeling.

NOTE: This scale does not measure inappropriate or regressive affective arousal, which is defensive.

### BRIEF OVERVIEW OF DEGREE OF INTENSITY OF AFFECTIVE AROUSAL (IN-SESSION EXPOSURE TO PHOBIC AFFECTS)

- 81-100 - Full experience of emotion, well-integrated. Full grief, full openness/tenderness/trust, full justifiable outrage, full joy, etc.  
 61-80 - Strong experience of emotion. Strong affect quickly cut off or sustained but a little held back.  
 41-60 - Moderate experience of emotion. Some grief, some anger, some openness/tenderness/trust/care, etc. Some holding back.  
 21-40 - Low experience of emotion. Beginning indications of grief, anger, openness/tenderness/trust/care/joy, etc. Much holding back.  
 1-20 - Little/no physiological experience of emotion in facial expression, verbal report, tone of voice, body movement. Flat, dull, bland presentation.

- 91-100 Full and complete affective arousal. Full and vivid feeling, imagery, and memories sustained over several minutes (ebbing and flowing); e.g. full sobbing, with other affects, e.g. murderous but justifiable outrage, openness/care/tenderness/joy/trust deeply felt as shown in face, vocal tone or body. Excellent ability to modulate or control affect, and integrate it with other affects that balance and enrich the experience, e.g. rage with compassion, tenderness with limit-setting. Full relief and resolution.
- 81-90 Very strong affective arousal. Very strong feeling, imagery, and memories, well sustained (ebbing and flowing) just slightly inhibited or interrupted by other affects as shown in face, vocal tone or body. The affect is partially integrated with other affects, e.g. rage with some compassion; care/trust with limits. Very strong but not full relief.
- 71-80 Strong affective arousal. Strong feeling either sustained (ebbing and flowing) with a little holding back or strong feeling that slowly diminishes or is interrupted by another affect; e.g., strong bursts of sobs or anger, strong expressions of caring/tenderness as shown in face, vocal tone or body. Minimal integration with other feelings. Imagery or memories with strong emotional content. Strong relief.
- 61-70 High-moderate affective arousal. Much feeling, somewhat sustained (ebbing and flowing) with some holding back or quickly cut off. e.g., bursts of crying or anger, much caring/tenderness/warmth/trust as shown in face, vocal tone or body. Only beginning indications of integration with other affects. Imagery or memories with much emotional content. Much relief.
- 51-60 Moderate affective arousal. Moderate feeling; moderate duration/moderate holding back, e.g. tearing up, moderate anger, some tender feelings as shown in face/vocal tone/body. Imagery or memories with moderate emotional content. Moderate relief.
- 41-50 Low-moderate affective arousal. Mild feeling with much holding back shown in face, vocal tone or body, e.g. briefly tears up, raises voice a little in anger, or says a few tender words for short duration, speaks openly. Imagery or memories with some emotional content. Some relief.
- 31-40 Low affective arousal. Low, quickly passing experience of feeling shown in face, vocal tone or body; e.g. clenching fist, sighs, grimaces, choking up, slight sadness/anger/care for self but quickly stopped. Imagery or memories with low emotional content but appears very restrained/hold back/constricted. Very little relief.
- 21-30 Very low affective arousal. Minimal or barely visible/audible signs of feeling of short duration shown in face, vocal tone or body. May report slight change in internal bodily state. Imagery/memories have very low expression of feeling. Almost no relief.
- 11-20 No affective arousal, but bland verbal report of feeling. Almost no expression on face. Flat/dull/bland tone of voice, stiff or barely moving body. Patient may sense a change in internal bodily state, but is unsure whether it is a feeling or not. Only bland, unfeeling report of images or memories with emotional content. No relief.
- 1-10 No affective arousal. No report of feeling. No observable experience of feeling on face. Flat/dull/bland tone of voice. Stiff, unmoving body. No imagery or memories with emotional content. Emotionally numb and/or tense. Self hate/negation. No relief.



## NEW LEARNING: ADAPTIVE EXPRESSION OF THOUGHTS, FEELINGS, WISHES, OR NEEDS 8/20/08

STDP: Affect Expression: Ability to adaptively express thoughts, feelings, wishes, needs

CBT: Ability to adaptively express thoughts, wishes, needs.

DBT: Implementation of skills training. Adaptive decision-making/judgment vs. crisis generating behaviors.

Accuracy of communication of emotions and competencies. Decreasing mood dependency of behavior.

### MAIN COMPONENTS:

1. Appropriate, adaptive interpersonal, face-to-face expression (spirited but well-controlled and well-integrated) of thoughts and feelings. As of Aug 2008, if affect is expressed directly in the real relationship with the therapist, this should be noted as 'in session' expression.
2. Degree of relief/satisfaction versus discomfort in action or expression.

NOTE: Face-to-face means in-person, real-life interactions outside of therapy (i.e., how spontaneous/authentic is the patient able to be with others?) This is adaptive, not regressive or immature expressions. Valid exceptions to face-to-face expression: reports of adaptive crying when alone (if not to avoid doing so with others); adaptive masturbatory behavior; or adaptive self care or self-talk when alone.

### BRIEF OVERVIEW OF NEW LEARNING OF ADAPTIVE EXPRESSION:

81-100 - Excellent expression of thoughts/feelings; sense of completeness, balance, and excellent results. Great relief and satisfaction experienced.

61-80 - Good expression of thoughts/feelings; slight holding back. Not all expressed, but good sense of relief in speaking up. Good satisfaction.

41-60 - Moderate expression of thoughts or feelings; moderate holding back, but moderate effectiveness. Moderate relief. Moderate satisfaction.

21-40 - Beginning attempt to express thoughts or feelings. Much holding back. A little relief in expression. A little satisfaction.

1-20 - No expression of adaptive thoughts or feelings. Total holding back. No relief. No satisfaction. High end of this rating level: can begin to imagine expressing adaptive thoughts or feelings, wants and needs, but is as yet unable put it into action.

- 91-100 Excellent, full, free and unashamed expression of thoughts or feelings, wants/needs. Excellent, well-modulated and well-articulated communication. Acknowledges other emotions that come up and can integrate them. A sense of full completeness and close interpersonal involvement that invites and encourages connection – but can tolerate conflict when unavoidable. Great relief and satisfaction. No discomfort in expression.
- 81-90 Very good expression of thoughts or feelings. Very good communication of needs in a clear, and direct/effective way, and very good but not full integration of other adaptive thoughts or feelings with most people, but not all. Very well-modulated expression with very much relief and very little if any discomfort.
- 71-80 Good expression of thoughts or feelings. Good, clear and direct expression with some integration of other adaptive thoughts or feelings (e.g., anger with compassion). Well-modulated expression with much relief and some discomfort.
- 61-70 High moderate expression of thoughts or feelings. Much clear expression with beginning attempts to integrate other thoughts or feelings or a little indirect but gets the message across. Partially modulated bursts of adaptive feeling. More relief than discomfort.
- 51-60 Moderate expression of thoughts or feelings. Some clarity and elaboration. Expression may be toned down/devalued, or indirect/unclear/ambiguous. Thoughts or feelings not yet integrated (black or white presentation). Slightly modulated. Moderate relief and moderate discomfort in expression.
- 41-50 Low-moderate expression of feelings or needs. Very little elaboration and expression may be quickly toned down or devalued. Unintegrated and poorly modulated. Beginning awareness of impact on others. More discomfort than relief.
- 31-40 Minimal expression of thoughts or feelings. Briefly expresses thoughts or feelings, but may do so inappropriately, with difficulty or without elaboration, or indirect/unclear/ambiguous. Either very poor modulation (mostly inhibited/holding back)—or too little inhibition with inappropriate acting out with much discomfort in expression.
- 21-30 Beginning attempt to express thoughts or feelings, to others. Expresses some thoughts or feelings maladaptively or with great difficulty, e.g. irritation, frustrated anger or anxious assertion or closeness or quickly overwhelmed by inhibitory thoughts or feelings that block expression. Inappropriate expression; e.g. childlike, immature. Very poorly integrated with other thoughts or feelings and very poorly modulated. Very much discomfort in expression.
- 11-20 No interpersonal expression of thought or thoughts or feelings, but can imagine expressing them. High end: Can imagine doing so, but has not actually done it yet. Low end: Can barely imagine expressing thoughts or feelings or imagines doing so inappropriately or losing control. Some regressive or inappropriate behaviors instead of appropriate expression.
- 1-10 No adaptive expression of thoughts or feelings, and cannot imagine expressing feelings appropriately. High end: Aware of thoughts or feelings, but can't imagine expressing them. Low end: No idea of how to express own thoughts or feelings/needs. Great discomfort/tension/turmoil or numbness. Much regressive acting out behavior to replace appropriate expression.

## INHIBITORY FEELING: ANXIETY, GUILT, SHAME, OR PAIN 8/20/08

STDP: Anxiety Regulation: The regulation of Inhibitory Affects (anxiety, guilt, shame, and pain)

CBT: Degree of Anxiety in the segment: Anxiety reduction is a primary focus

DBT: Degree of Anxiety/Inhibition

**MAIN COMPONENTS:** Rate the degree of inhibition (the mode) in the 10-minute segment; i.e., the overall intensity of observable anxiety, guilt, shame, pain as shown in verbal report, vocal tone, and non-verbal behavior. Raters should pay attention to physiological signs of inhibition; Below is a non-exhaustive list of examples:

1. Anxiety: trembling, tension, squirming, shifting, restlessness, twitching, nail-biting.
2. Shame or Guilt: blushing, looking down, lowering tone of voice, hands over face or covering eyes, head down.
3. Pain: wincing, groaning, whimpering.
4. Common to one or more of the above: hesitation, looking away, shifting in seat, sweating, vigilance, guardedness. All kinds of displacement activities such as scratching, grooming, rubbing or twisting hair, rubbing hands, squirming or shifting in seat.

**NOTE:** It is very important to distinguish inhibitory feeling from defensive behavior, which is not coded on the ATOS scale. Confusion sometimes arises because people who are highly defended are often described as 'inhibited.' This scale codes observable indications of inhibitory affect. For example, a lowered head can indicate shame about grief, and is coded. Defenses, on the other hand, are used to avoid or escape from inhibitory affects, and hence lead to a reduction in inhibitory affect, e.g. changing the subject can reduce shame about grief. These defensive avoidance behaviors are not signs of observable inhibition, and thus are not coded. (Defenses can be scored on Perry's DMRS—Defense Mechanism Rating Scale). Keep in mind the following:

- The healthiest individuals score low on inhibitory feeling because they are comfortable with their feelings, and at ease. They also have low defensiveness.
- The most defended patients can seem low on the inhibitory feeling scale because their defenses are effective in blocking 'anxieties,' but if you look for vigilance, tension, or bodily rigidity you will find some. The rating may not be high, but it will not be in the lowest range (1-10), which will only be scored by individuals who are comfortable or at ease with themselves.
- When defenses break down or are only partially effective, inhibitory feelings become more observable and easier to rate.
- Remember that there are appropriate versions of anxiety, shame (or remorse), or pain that are healthy. For example, appropriate shame/remorse is adaptive when it promotes resolution or growth, and it is often accompanied by adaptive grief. Adaptive inhibition is not rated.

### BRIEF OVERVIEW OF INHIBITORY FEELING: VERBAL OR NONVERBAL EVIDENCE OF THE OBSERVABLE PRESENCE OF ANXIETY, GUILT, SHAME, OR PAIN

81-100 -Extreme inhibitory affect: e.g., extreme shakiness, hesitancy, vigilance, trembling, anxiety or shame. Extreme uneasiness.

61-80 -High inhibitory affect: e.g., high levels of shakiness, hesitancy, vigilance, trembling, anxiety or shame. Great uneasiness.

41-60 -Moderate inhibitory affect: e.g., moderate shakiness, hesitancy, vigilance, trembling, anxiety or shame. Moderate uneasiness.

21-40 -Low inhibitory affect: e.g., low shakiness, hesitancy, vigilance, trembling, anxiety or shame. Low level of uneasiness.

1-20 -Little or no inhibitory affect: Little or no shakiness, guardedness, hesitancy, vigilance, trembling, anxiety, etc. Comfortable, at ease.

- 91-100 **Extreme inhibitory affect.** Flooded with anxiety, guilt, shame, or pain as shown by verbal report and/or by signs such as extreme shakiness, hesitation, sighing, or vigilance. Body movement and muscles are extremely tight, tense and rigid. Tone of voice is extremely hesitant, trembling or inaudible. Extreme uneasiness. (Over 90% inhibition.)
- 81-90 **Very high inhibitory affect.** Very high levels of anxiety, guilt, shame or pain shown by verbal report and/or by signs such as very great shakiness, hesitation, sighing, or vigilance. Body movement and muscles are greatly tight, tense and rigid. Tone of voice is greatly hesitant, trembling or inaudible. Very high uneasiness. (81-90% inhibition.)
- 71-80 **High inhibitory affect.** High levels of anxiety, guilt, shame or pain shown by verbal report and/or by signs such as great shakiness, hesitation, sighing or vigilance. Body movement and muscles are highly tight, tense and rigid. Tone of voice is greatly hesitant, trembling or inaudible. High level of uneasiness. (71-71-80% inhibition.)
- 61-70 **High-moderate inhibitory affect.** More than moderate levels of anxiety, guilt, shame or pain shown by verbal report and/or by signs such as above moderate levels of shakiness, hesitation, sighing or vigilance. Body movement and muscles are more than moderately tight, tense and rigid. Tone of voice is more than moderately hesitant, trembling or inaudible. Above moderate level of uneasiness. (61-70% inhibition.)
- 51-60 **Moderate inhibitory affect.** Moderate levels of anxiety, guilt, shame or pain, shown by verbal report and/or by signs such as moderate shakiness, hesitation, sighing, tension or vigilance. Body movement and muscles are moderately tight, tense and rigid. Tone of voice is moderately hesitant, trembling or inaudible. Moderate uneasiness. (51-60% inhibition.)
- 41-50 **Low-moderate inhibitory affect.** Low-moderate levels of anxiety, guilt, shame or pain shown by verbal report and/or by signs such as shakiness, hesitation, shifting, sighing, tension or vigilance. Body movement and muscles are less than moderately tight, tense and rigid. Tone of voice is less than moderately hesitant, trembling or somewhat difficult to hear. Less than moderate uneasiness. (41-50% inhibition.)
- 31-40 **Low inhibitory affect.** Low-moderate levels of anxiety, guilt, shame or pain as shown by verbal report and/or by signs such as shakiness, hesitation, shifting, sighing, vigilance. Body movement and muscles show low levels of tightness, tension or rigidity. Tone of voice shows low level of hesitance, trembling or somewhat difficult to hear. Low level of uneasiness. (31-40% inhibition.)
- 21-30 **Little inhibitory affect.** Little anxiety, guilt, shame or pain as shown by verbal report and/or by such signs as shakiness, hesitation, shifting, sighing, vigilance. Body movement and muscles show little tightness, tension or rigidity. Tone of voice has little hesitance, trembling, and is audible. A little uneasiness. (21-30% inhibition.)
- 11-20 **Very little inhibitory affect.** Very little anxiety, guilt, shame or pain as shown by verbal report and/or by such signs as shakiness, hesitation, shifting, sighing, or vigilance. Body movement and muscles show very little tightness, tension or rigidity. Tone of voice has very little hesitance, trembling, and is audible. Very little uneasiness. (11-20% inhibition.)
- 0-10 **No Inhibitory Affect.** No (or almost no) anxiety, guilt, shame or pain as shown by verbal report and/or by signs such as absence of shakiness, hesitation, shifting, sighing, or vigilance. Body movement and muscles are relaxed and movement is smooth and coordinated. Behavior and vocal tone are calm, spontaneous, natural, and very audible. Inhibitory thoughts or feelings, if present, are there to help, guide, direct and protect. No muscle tension is evident. Comfortable and at ease. (10% inhibition or less.)



## IMPROVEMENT IN SELF-IMAGE 8/20/08

STDP: Restructuring of the Sense of Self  
CBT: Improvement in self-esteem and positive self talk  
DBT: Degree of self-validation vs self-invalidation.

MAIN COMPONENTS: The patient's inner experience or verbal report of adaptive self image, in terms of the following:

1. Degree of experience of self compassion, self care, or value as a human being.
2. Degree of adaptive pride in positive qualities (not defensive pridefulness or grandiosity); e.g., self worth, self esteem, competence, etc.
3. Degree of ability to compassionately acknowledge and accept one's limitations or realistic negative qualities of the self.

NOTE: Both grandiosity and devaluation of self should be considered maladaptive.

### BRIEF OVERVIEW OF IMPROVEMENT IN SELF-IMAGE

81-100 - **Highly adaptive** sense of self; compassionate and accepting of strengths and vulnerabilities.

61-80 - **Very adaptive** sense of self; much compassion and acceptance, but some self-blame or shame present.

41-60 - **Moderately adaptive/maladaptive** aspects of self-image in approximately equal amounts.

21-40 - **Very maladaptive** sense of self, but a little compassion, and a little ability for acceptance.

1-20 - **Highly maladaptive** sense of self, little or no compassion, awareness, or self acceptance—or excessive grandiosity

- 91-100 Highly adaptive sense of self.** Great but healthy pride in own strengths (not grandiose), and highly affirming of own wants and needs, but not demanding. Very realistic but highly compassionate about own weaknesses. Great sense of self-compassion and self-acceptance, with almost no self-blame or shame.
- 81-90 Mostly adaptive sense of self.** Very much pride in own strengths and very much affirming of own wants and needs. Very much ability to acknowledge and accept limitations. Very much compassion and self-acceptance, but a little self-blame or shame.
- 71-80 Very adaptive sense of self.** Much pride in own strengths, and quite affirming of own wants and needs in relation to others. Much ability to acknowledge and accept limitations. Much compassion and self-acceptance, but some self-blame or shame.
- 61-70 Somewhat adaptive sense of self.** Some pride in own strengths, and some affirming of own wants and needs. Some ability to acknowledge and accept limitations. Some compassion and self acceptance, but moderate self-blame or shame present.
- 51-60 Mixed adaptive/maladaptive view of self.** Slightly more adaptive than maladaptive view of self. Slightly more pride than shame in self. Compassion and self-acceptance slightly greater than devaluation or grandiosity. Only moderately affirming of own wants and needs. Only a little more compassion and self-acceptance than self-blame or shame.
- 41-50 Mixed maladaptive/adaptive view of self.** Slightly more maladaptive than adaptive view of self. Slightly more shame than pride in self. Devaluation or grandiosity is slightly stronger than self-compassion or acceptance of limitations. Only moderately affirming of own wants and needs. Slightly more self-blame and shame than compassion for self.
- 31-40 Somewhat maladaptive sense of self.** Some shame in self. Minimal pride in own strengths. Somewhat affirming of own wants and needs in relation to others. Somewhat able to acknowledge and accept limitations. Some compassion and self-acceptance of self regarding limitations, but more self-blame or shame.
- 21-30 Very maladaptive sense of self.** Much shame in self. Little pride/some grandiosity. Almost no affirming of wants and needs. Minimal ability to acknowledge and accept limitations and minimal ability to control impulses. Minimal compassion and self acceptance of self regarding limitations. Much self-blame or shame.
- 11-20 Mostly maladaptive sense of self.** Very much shame and very little pride/or much grandiosity. Devaluation of self or wants and needs. Very little ability to acknowledge and accept limitations. Very little ability to control impulses. Very little compassion and self-acceptance, but very much and very destructive self-blame or shame.
- 1-10 Highly maladaptive sense of self.** Extremely maladaptive view of self, with little or no pride/or extreme grandiosity. Denying or ignoring wants and needs. Little or no ability to acknowledge and accept limitations or control impulses. Almost no compassion or self-acceptance, but extremely destructive self-blame or shame.